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ABSTRACT

Based on two national assessments of the writing proficiency of representative samples of students in grades 4, 8, and 11 conducted during the school years ending in 1984 and 1988, this report assesses the informative, persuasive, and imaginative writing performance of the nation's students and tracks changes in performance over time. The first three chapters of the report describe student performance on the informative, persuasive, and imaginative writing tasks included in the writing trend assessments, based on the results of the primary trait and holistic analyses. The fourth chapter summarizes trends in average task accomplishment for the nation and various demographic subpopulations. In the fifth chapter, trends in students' grammar, punctuation, and spelling are discussed. The sixth chapter discusses factors that appear to be related to writing performance, such as students' instructional experiences and home environment. The report concludes that despite some progress on some tasks, students' writing performance across tasks remains low and has changed little across time. The report also finds that the extent to which students at all grade levels value writing, use it in their own lives, and engage in writing process activities remains quite limited. (A procedural appendix and an appendix of data are attached.) (RS)

ED315780

THE NATION'S REPORT CARD

The Writing Report Card, 1984-88

FINDINGS FROM THE NATION'S REPORT CARD

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THE NATION'S REPORT CARD

The Writing Report Card, 1984-88

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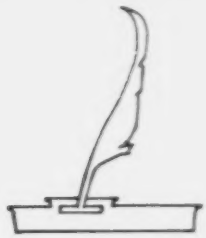

Arthur N. Applebee • Judith A. Langer
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OVERVIEW

THIS REPORT IS based on two national assessments of writing proficiency conducted during the school years ending in 1984 and 1988. In each of the assessments, nationally representative samples of students in grades 4, 8, and 11 — approximately 18,000 students in all — responded to a series of writing tasks. To assess the informative, persuasive, and imaginative writing performance of the nation's students, and to track changes in performance over time, the 1988 assessment included a set of 12 writing tasks that had been administered in 1984.[1] Thus, the same tasks were given to nationally representative samples of students at two different points in time. Students also were asked to provide demographic information and to answer a brief questionnaire about their writing experiences and instruction.

Because competence in one type of writing does not necessarily go hand in hand with competence in another, the 1984 and 1988 assessments were designed to examine students' abilities to engage in three types of writing: informative, persuasive, and imaginative. For example, students were asked to complete brief informative descriptions, reports, and analyses; to write persuasive letters and arguments; and to invent their own stories. The papers were evaluated on the basis of students' success in accomplishing the specific purpose of each writing task (as measured by primary trait scoring), their relative writing fluency (as measured by holistic scoring), and their mastery of the conventions of written English (as measured by their spelling, punctuation, and grammar).

Major Findings: 1974-1988

Although the results presented here cannot be directly linked to the results from assessments conducted prior to 1984, the procedures used are similar to those that served as the basis for the previous NAEP

[1] A forthcoming report will summarize results for the entire set of writing tasks administered in 1988, including a study of longer response times and several new tasks that were not included in the 1984 assessment.

report, *Writing Trends Across the Decade, 1974-84*.[2] Taken together, these two reports provide the following view of trends across the 14-year period from 1974 to 1988.

Levels of writing performance in 1988 appeared to be substantially the same as in 1974. Many students continued to perform at minimal levels on the NAEP writing assessment tasks, and relatively few performed at adequate or better levels.

At the elementary school level, writing performance has been relatively constant. From 1974 to 1984, students evidenced increased performance on some tasks and decreased performance on others. From 1984 to 1988, they improved somewhat on several tasks and did not decline on any.

At the middle school level, there have been changes from assessment to assessment, but the net effect over the 14-year period is one of relative stability. Mixed trends between 1974 and 1979 were followed by consistently improved performance between 1979 and 1984. However, between 1984 and 1988, eighth-grade students showed more declines than gains, reducing performance to approximately the 1974 and 1979 levels.

At the high school level, there has also been little overall change. Performance decreased for most tasks between 1974 and 1979 and recovered somewhat in 1984. However, from 1984 to 1988, performance changed little on most tasks. Consequently, despite a dip in 1979, performance between 1974 and 1988 appears to have remained quite consistent.

Summary of Procedures: 1984 and 1988

To examine trends in writing achievement from 1984 to 1988, one set of analyses, based on primary trait scoring, focuses on the writer's effectiveness in accomplishing each task; it is sensitive to the writer's understanding of the audience as well as to the inclusion of specific features needed to accomplish the specific purpose of that task. The primary trait scoring criteria defined five levels of task accomplishment: not rated, unsatisfactory, minimal, adequate, and elaborated. General definitions of these levels are provided on the following page.

[2]See Arthur N. Applebee, Judith A. Langer, and Ina V.S. Mullis, *Writing Trends Across the Decade, 1974-84* (Princeton, NJ: Educational Testing Service, National Assessment of Educational Progress, 1986) for the detailed trend results from 1974 to 1984. The Data Appendix contains the figures from that report, which provided the trend results for each of the tasks included in the 1974 to 1984 writing assessments. The assessment approach from 1974 to 1984 is consistent with the 1984 to 1988 trend results presented herein (i.e., the types of writing tasks and scoring methods). However, beginning in 1984, NAEP expanded the number of different kinds of tasks given to students and developed new analytic procedures for reporting writing assessment results. This information is not available for assessments prior to 1984.

FIGURE 1

Levels of Task Accomplishment

THE NATION'S REPORT CARD

Score	
4	**Elaborated.** Students providing elaborated responses went beyond the essential, reflecting a higher level of coherence and providing more detail to support the points made.
3	**Adequate.** Students providing adequate responses included the information and ideas necessary to accomplish the underlying task and were considered likely to be effective in achieving the desired purpose.
2	**Minimal.** Students writing at the minimal level recognized some or all of the elements needed to complete the task but did not manage these elements well enough to assure that the purpose of the task would be achieved.
1	**Unsatisfactory.** Students who wrote papers judged as unsatisfactory provided very abbreviated, circular, or disjointed responses that did not even begin to address the writing task.
0	**Not Rated.** A small percentage of the responses were blank, indecipherable, or completely off task, or contained a statement to the effect that the student did not know how to do the task; these responses were not rated.

The samples of writing generated by students in the assessments represent their ability to produce first-draft writing on demand in a relatively short time under less than ideal conditions; thus, the guidelines for evaluating task accomplishment are designed to reflect these constraints and do not require a finished performance. Because primary trait scoring is based on established criteria, it is theoretically possible for all papers to be rated at the highest level on a straightforward task, or for all papers to be scored at the lowest levels on a particularly difficult task. Thus, the primary trait scoring procedure provides the best assessment of students' ability to perform the task.

An analysis of the primary trait results using the Average Response Method (ARM) provides an estimate of trends in students' average performance across the set of tasks for the nation and for subpopulations of students.[3]

Another set of analyses, based on general impression or holistic scoring, focuses on the writer's fluency in responding to each task relative to the performance of other students at that grade level. It is sensitive to a range of different skills, including organization, quality of content, grammar and usage, spelling, punctuation, and word choice. In holistic scoring, readers do not make sepa-

[3]Further details about the Average Response Method (ARM) for scaling assessment results can be found in the Procedural Appendix.

rate judgments about specific aspects of writing, but instead consider the overall effect, rating each paper on a 6-point scale based on its general fluency relative to the other papers being evaluated. Unlike primary trait scores, the average score for a set of papers rated holistically will generally fall near the midpoint of this scale.

Thus, primary trait scoring permits year to year and grade level to grade level comparisons on specific criteria applied across the grades, while holistic scoring permits year to year comparisons of relative fluency at each grade. A description of the primary trait and holistic scoring procedures and a comparison of results from the two methods are included in the Procedural Appendix.

The final set of analyses, applied to a subset of the papers, closely examines students' accuracy in spelling, grammar, and punctuation. (See Procedural Appendix for the scoring scheme.)

Grade Level Findings: 1984 and 1988

Despite some progress on some tasks, overall, students' writing performance across tasks remains low and has changed little across time. In both 1984 and 1988, substantially more than half the high-school students assessed wrote a less than adequate response to five of the six writing tasks administered. Further, the extent to which students at all grade levels value writing, use it in their own lives, and engage in writing process activities remains quite limited.

Grade 4. Students showed significant gains in the percentage of responses judged adequate or better on three of the six writing tasks given at grade 4. The relative fluency of fourth graders' responses also improved on one task. No significant decreases across time were found for any task administered at this grade level. However, the summary analysis across tasks indicated that the change in average performance between 1984 and 1988 was not statistically significant.[4]

Grade 8. Eighth graders showed significant increases from 1984 to 1988 in the percentage of adequate or better responses on two of six tasks requiring informative or persuasive writing, and showed improved fluency on one task. However, they showed declines on one task in the percentage of adequate or better responses and on two tasks in the percentage of minimal or better responses. The declines evidenced by these students outweighed the gains, and as a result, students at grade 8 showed a significant decline overall.

Grade 11. At grade 11, there was an increase in the percentage of students who were able to write a minimal or better response to one informative task. In addition, fluency in response to one of the persuasive tasks also increased. However, on average, the writing performance of these high-school students showed no significant change from 1984 to 1988.

Additional Highlights

Students in both assessments appeared to have the most success on informative writing tasks that required straightforward reports or letters. A majority of the eighth- and eleventh-grade students wrote responses to these tasks that were judged adequate or better.

In 1988, students at grades 8 and 11 improved over their counterparts in 1984 on an informative task requiring analysis. However, performance remained very low. Only 13 to 14 percent of the students at either grade level responded adequately or better to this task, which asked them to compare and contrast alternatives.

[4] It should be noted, that one of the tasks on which these elementary-school students made significant gains — an imaginative writing task — could not be included in the summary analysis for technical reasons. Further information is provided in the Procedural Appendix.

In persuasive writing, fourth graders showed improvements in their ability to convince others and refute opposing points of view. Results for eighth graders were mixed and performance at grade 11 showed little change. Fewer than one-third of the students wrote responses judged adequate or better to any of the persuasive tasks. Even at grade 11, only 28 percent wrote adequate or better responses to the least difficult persuasive task.

Sixty-five percent of the fourth graders demonstrated an understanding of the basics of story-telling, but only 15 percent were able to write well-developed stories.

Black and Hispanic students appeared to show consistent improvements at all three grade levels, although the changes were not statistically significant.[5]

For the nation as a whole, students' control of the mechanics of written English was comparable in 1984 and 1988. However, Black students showed small gains in grammar, punctuation, and spelling relative to their White counterparts.

At all grade levels, students reported somewhat more frequent school writing assignments in 1988 than in 1984. This was particularly true for essays and other forms of informative and persuasive writing. However, 36 percent of the eleventh graders reported that they had not written an essay, composition, or theme for their English class in the previous week.

In 1988, fourth and eighth graders reported doing more revising than did their counterparts in the earlier assessment; however, the use of revising strategies reported by students in grade 11 did not appear to change across time.

Students' attitudes toward writing changed slightly across time. In 1988, fourth and eighth graders appeared to be more aware of the positive value of writing in their lives, and eighth and eleventh graders reported engaging in more self-sponsored writing activities.

In both 1984 and 1988, students' enjoyment of writing and their likelihood of writing outside of school decreased as their grade level increased. In 1988, only 26 percent of the eleventh graders reported engaging in much writing outside of school.

A Note on Interpretations

NAEP reports the performance of groups of students, not individuals. The results in this report include measures of average writing performance for groups of students and the percentages of students responding to the assessment tasks at different levels of success. Because the averages and the percentages presented in this report are based on samples, they are necessarily estimates. Like all estimates based on surveys, they are subject to sampling error as well as measurement error.

NAEP uses a complex procedure — the jackknife methodology — to compute standard errors that estimate the sampling error and other random error associated with observed assessment results. This report adheres to a standard convention whereby trend differences are identified as significant (noted with an asterisk) only if they are at least twice as large as their standard errors. Such differences are described in this report as "significant" improvements or declines in the statistical sense.

[5] The evidence of stability or slight improvement in the writing proficiency of Black high-school students is particularly encouraging given that the dropout rate for these students has reportedly been decreasing since 1974. As Black students who in previous years might have left school are now more likely to remain, one might expect the writing performance of Black high-school students overall to decline. However, the NAEP performance results indicate slight gains, rather than declines, in their proficiency. U.S. Department of Education, Office of Educational Research and Improvement, National Center for Education Statistics, *1988 Education Indicators* (Washington, DC: U.S. Department of Education, 1988), p.28.

It is important, however, to distinguish **statistical** significance from **educational** significance. Some statistically significant differences may not merit educational concern and some patterns of results that are not statistically significant may have educational significance. Readers must use their own knowledge and experience to decide for themselves how important particular changes or differences are in the real world, since statistical conventions can aid, but not replace, good judgment.

Interpreting the assessment results — attempting to put them into a real world context, advancing plausible explanations, and suggesting possible courses of action — will always be an art, not a science. No one can control all the possible variables affecting a survey. And any particular change in achievement may be explained in many ways or perhaps not at all. The interpretive remarks in this report represent the professional judgments of NAEP staff and consultants and must stand the tests of reason and the reader's knowledge and experience. The conjectures may not always be correct, but they represent a way of stimulating the debate necessary to achieve a full understanding of the results and to implement appropriate action.

Chapters One, Two, and Three of this report describe student performance on the informative, persuasive, and imaginative writing tasks included in the writing trend assessments, based on the results of the primary trait and holistic analyses. Chapter Four summarizes trends in average task accomplishment for the nation and various demographic subpopulations, offering a global view of the assessment results. In Chapter Five, trends in students' grammar, punctuation, and spelling are discussed. Finally, Chapter Six discusses factors that appear to be related to writing performance, such as students' instructional experiences and home environment.

CHAPTER ONE

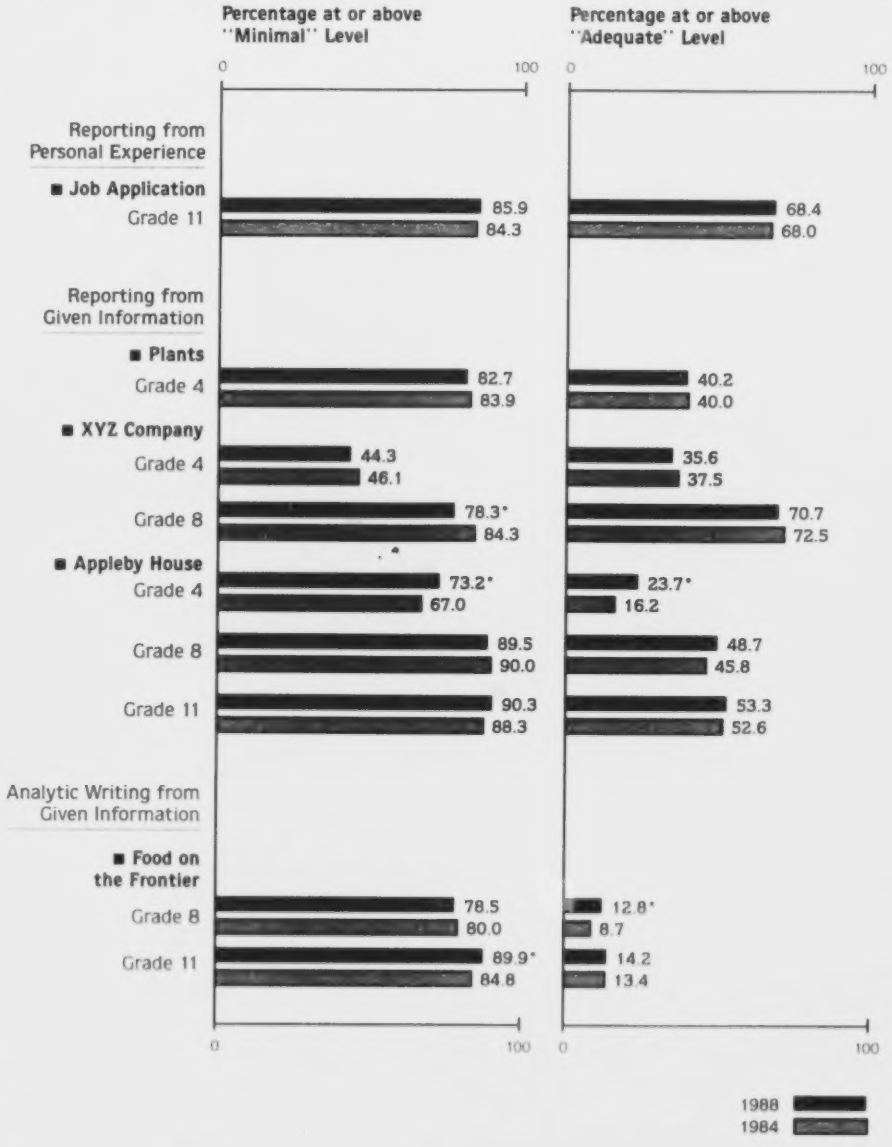
Trends in Informative Writing

INFORMATIVE WRITING IS used to convey ideas — to inform others about facts, feelings, or procedures. It can involve simple retelling or reporting as well as more complex analyses or generalizations about experiences or knowledge. We use informative writing when composing a letter, describing a trip we have taken, integrating lecture notes into a written report, recording an analysis of the recent stock market crash, and generalizing financial lessons we have learned. Informative writing serves many purposes in accomplishing everyday as well as academic goals and can involve straightforward as well as highly complex thinking.

Of the five informative writing tasks included in the assessment of trends, one required a report from personal experience, three required reports from given information, and one required analysis of given information. Together, they reflect the diversity of purposes for which informative writing is undertaken. FIGURE 1.1 presents data on the percentage of students who performed at or above the minimal and adequate levels of task accomplishment for each informative task included in the 1984 and 1988 assessments.

FIGURE 1.1 | Trends in Informative Writing: Grades 4, 8, and 11

THE NATION'S REPORT CARD naep



* Shows statistically significant difference between years at the .05 level. See the Data Appendix for jackknifed standard errors and the Procedural Appendix for information on NAEP methods for computing standard errors.

Reporting from Personal Experience

"Job Application" required eleventh-grade students to provide a brief description of a desirable summer job and to summarize their previous experiences or qualifications for it.

More eleventh graders provided adequate or better responses to this task than to any other informative task they were assigned. In 1984, 68 percent of the eleventh graders provided at least an adequate description of their job-related experiences and 84 percent provided a description that was judged minimal or better. The 1988 results indicate no significant change across time in performance on this task (see TABLE 1.1).

TABLE 1.1 Reporting from Personal Experience: Trends in the Percentage of Students at Each Level of Task Accomplishment

THE NATION'S REPORT CARD

	Not Rated	Unsatisfactory	Minimal	Adequate	Elaborated
Job Application: Grade 11					
1988	1.3	12.8	17.5	64.4	4.1
1984	1.4	14.4	16.2	65.4	2.7

Note: No statistically significant difference between years at the .05 level. No significance test is reported when the proportion of students at a score point is less than 5. See Data Appendix for jackknifed standard errors.

In 1988, approximately 15 percent of the eleventh graders provided unsatisfactory responses that did not present any detail about the type of job desired. For example, the following student response, reproduced verbatim, is typical of such papers.

The kind of job that I don't have to work hard and get paid a good wage

Responses rated as minimal provided some detail, but they created no organizational framework for the reader to use to fit the parts together. They mentioned the kind of job desired, but did not describe relevant hobbies, interests, or past employment. The following student writing samples are typical.

The job I would like to have would have to deal with clerical skills and/or average skills.

I would like to have a part-time job. Because I need a lot of time for school work and mostly to do papers and other stuff. School is my top priority, and the job would be second. I would like to have most of my weekend nights off to go out. I would not like to sit at a desk all day and file papers. I would like to have something that would keep me busy all of the time at work so I can have that time to get things done and I really like to work. I would not like to do hard work where I would get bored, or something that is not for my age level.

Despite some progress on some tasks, overall, students' writing performance across tasks remains low and has changed little across time.

Responses judged as adequate contained some information about the job desired and presented some relevant background appropriate to the job. The following examples are typical of the responses provided by nearly two-thirds of the eleventh graders.

I would like to work in a restuarant, or a store. I have worked in restuarants before and it was fun. I also think that it would be fun to be a salesperson, because I'm good with people. I want a fun job, because I'm the type of person that does well in a certain thing, when I like what I'm doing and I'd like to do well in my job.

The kind of job I would like to have, is a job around people and I want to be constantly busy with something. The skills I have are very extensive in English I have had speech, journalism, and many English classes ranging from Shakespheare to Steinbeck. I have good R.R. skills, and am good under pressure.

In contrast, the most successful papers — rated as "elaborated" — provided a full description within a cohesive framework. In these papers, students described the desired job as well as their qualifications and experience, and went beyond the basic elements required in an effort to "sell" themselves. The following is an example of such a paper.

I am interested in receiving a part-time job as a retail sales clerk. I prefer to be a sales clerk of a clothing store. I have had experience in retail sales for almost fouryears. I began in this field at age 13, at Conrad's Church Goods after school, about three to four days a week. I maintained this position at Conrad's for about a year and a half. I continued this career by holding a job at Bullfrogs and Butterflys children's apparel. I have worked for this corporation for a year and a half. I enjoy working in retail sales because I enjoy working with others + I feel that I am very responsible for the position.

Reporting from Given Information

"Plants" required fourth-grade students to summarize a science experiment depicted in a series of pictures showing different stages of a plant's growth.

"XYZ Company" required fourth- and eighth-grade students to complete a letter explaining that a previously ordered T-shirt had not been received and proposing a course of action.

"Appleby House" required fourth, eighth, and eleventh graders to write a newspaper article based on notes they were given about an unusual haunted house.

In both assessments, there were sharp differences at each grade level in students' performance on the informative tasks that involved reporting from given information. See TABLE 1.2 below.

Fourth graders performed best in responding to the Plants task; in 1984, 84 percent wrote at least a minimal description of a plant's growth stages and 40 percent wrote responses that were judged adequate. Performance on this item in 1988 was virtually unchanged.

The XYZ Company task permitted a comparison across grades as well as across time. In both 1984 and 1988, the percentage of effective responses to this task rose as expected from grade 4 to grade 8. As with the Plants task, there was no significant change

TABLE 1.2 Reporting from Given Information: Trends in the Percentage of Students at Each Level of Task Accomplishment

THE NATION'S REPORT CARD

	Not Rated	Unsatisfactory	Minimal	Adequate	Elaborated
Plants: Grade 4					
1988	1.3	16.0	42.5	40.2	[Category not
1984	1.4	14.7	43.8	40.0	applicable]
XYZ Company: Grade 4					
1988	2.8	52.8	8.7	35.6	[Category not
1984	3.8	50.1	8.6	37.5	applicable]
XYZ Company: Grade 8					
1988	0.3	21.4*	7.5*	70.7	[Category not
1984	0.0	15.7	11.9	72.5	applicable]
Appleby House: Grade 4					
1988	2.2	24.6	49.5	23.7*	0.0
1984	4.3	28.7	50.8	16.2	0.0
Appleby House: Grade 8					
1988	0.3	10.2	40.9	47.4	1.3
1984	0.4	9.6	44.2	44.3	1.6
Appleby House: Grade 11					
1988	0.8	8.9	37.0	52.0	1.3
1984	1.6	10.0	35.8	50.5	2.1

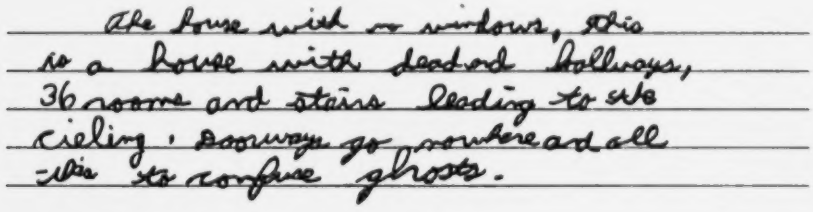
*Shows statistically significant difference between years at the .05 level. No significance test is reported when the proportion of students at a score point is less than 5. See Data Appendix for jackknifed standard errors.

across time in fourth-grade students' performance on this item, while at the eighth-grade level, the percentage of students writing at the minimal level or better declined significantly (from 84 percent to 78 percent). The percentage providing adequate responses, however, did not change significantly between 1984 and 1988.

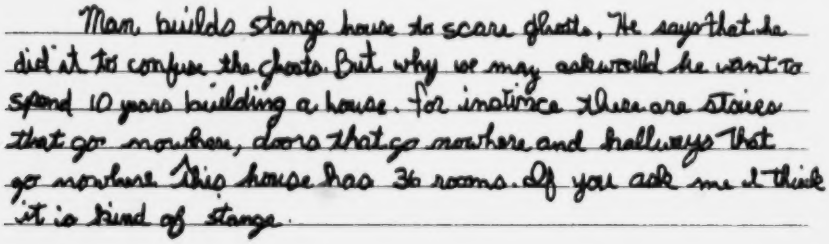
The Appleby House task was given at all three grades, and again the percentage of adequate or better responses rose across the grades. While the quality of eighth- and eleventh-grade students' responses to this task did not change across time, the percentage of fourth-grade students who wrote reports at or above the minimal level increased significantly (from 67 percent to 73 percent) between 1984 and 1988, as did the percentage performing adequately or better (from 16 percent to 24 percent).

The following sample responses to the Appleby House task illustrate the range of student performance.

In the Appleby House task, students were asked to reorganize the information provided and weave it into a report that would help the reader understand what the house is like. Some students simply enumerated the details in the sequence in which they were given without interrelating them. Such responses were rated as minimal.


The house with no windows, this
is a house with dead end hallways,
36 rooms and stairs leading to the
cieling. doorways go nowhere and all
-this to confuse ghosts.

In 1988, approximately half of the eighth and eleventh graders, as well as nearly one-quarter of the fourth graders, provided reports judged as adequate. These responses tended to be brief, but presented information about the house in a report format, as illustrated by the following example.


Man builds strange house to scare ghosts. He says that he did it to confuse the ghosts. But why we may ask would he want to spend 10 years building a house. For instance there are stairs that go nowhere, doors that go nowhere and hallways that go nowhere. This house has 36 rooms. If you ask me I think it is kind of strange.

In contrast, the most successful reports emulated a newspaper article and linked critical details within a cohesive thematic frame in ways that both interested and informed the reader. Unfortunately, only a handful of the students provided such reports. The following is an example of an elaborated paper.

Years of rumors and unsubstantiated facts have created, in a quiet urban neighborhood, a house of horrors. The dwelling is one Appleby House, a modest dwelling of 36 rooms built over an 8 year period. On interviewing neighbors, who dubbed the owner "strange", one finds that 100 carpenters have been employed to built such additions as stairways to ceilings, windows on blank walls, and doorways going nowhere. According to reports, these bizarre customizings are intended to confuse ghosts. Maybe the owner will report one day, that he had caught one in a closet and hallway! Until then, however, the mystery of the building of Appleby House remains just that - a mystery.

Analytic Writing

"Food on the Frontier" required eighth- and eleventh-grade students to read a social studies passage about frontier life and then to explain why modern-day food differs from frontier food.

Analytic writing is qualitatively different from the other kinds of informative writing that students were asked to perform. Reporting from personal experience and from given information involves simpler descriptions of what happened or what is, while analytic writing calls for an explanation of why something happened as it did or how the parts fit together. In the 1984 assessment, relatively few students at any grade produced pieces of analytic writing from given information that were judged adequate or better. As was seen in Figure 1.1, 80 percent of the eighth graders and 85 percent of the eleventh graders appeared to have a grasp of the basic elements of analytic writing, yet only 9 percent and 13 percent, respectively, wrote responses at the adequate level or better.

The trend results indicate an upward shift in analytic writing performance from 1984 to 1988, with significantly higher percentages of eighth graders reaching the adequate level and eleventh graders reaching the minimal level. However, a majority of the high-school juniors assessed in 1988 — some 86 percent — still failed to write an adequate analytic paper. Further, as shown in TABLE 1.3, almost none provided elaborated responses.

TABLE 1.3

Analytic Writing from Given Information: Trends in the Percentage of Students at Each Level of Task Accomplishment

THE NATION'S REPORT CARD

	Not Rated	Unsatisfactory	Minimal	Adequate	Elaborated
Food on the Frontier: Grade 8					
1988	0.6	20.9	65.7*	12.5*	0.3
1984	0.8	19.2	71.3	8.5	0.2
Food on the Frontier: Grade 11					
1988	1.5	8.7*	75.7	13.7	0.5
1984	1.6	13.6	71.4	12.8	0.6

*Shows statistically significant difference between years at the .05 level. No significance test is reported when the proportion of students at a score point is less than 5. See Data Appendix for jackknifed standard errors.

In 1988, 21 percent of the eighth graders and 9 percent of the eleventh graders provided unsatisfactory responses which either simply repeated information given in the passage or did not reflect an understanding of how to go about the task.

Well food on the frontier it ain't as good as food today. Because food today is like cake or fish or icecream or meat that's how it different.

In minimal responses to the Food on the Frontier task, such as the following, students tended to present comparisons but did not provide explanations about cause and effect. In 1988, nearly two-thirds of the students at grade 8 and three-quarters of the students at grade 11 provided minimal responses.

Today we have many types of Foods. We have, meat, vegetables Fruits, + "Junkfood." BACK IN THE pioneer days they were limited ON what they could eat. They couldn't go to the store + buy twinkies, pop, or chips. through the centuries businesses methods, skill, + tools have developed. Today, we have so much "artificial" things in our food. So through all this we were able to expand

Papers judged as adequate provided some explanation for their comparisons, but were either uneven or sparse in their presentation. The following is typical of such responses.

The difference is that they didn't have as many different kinds of food as we have today because a lot of our stuff is imported from other countries. We buy our food from the supermarket. They either had to hunt for their food or grow it. They could only use the things in their environment.

In contrast, the few most successful papers went beyond the basic elements required, weaving their analyses into an organized and elaborated whole. The following is an example of an elaborated response to this task.

Food on the frontier and food today are very different for several reasons. First of all, people on the frontier could only have food that would keep in all kinds of weather. They had no refrigeration to keep their food and no ovens and/or microwaves to prepare their food. Today, with all of our new technology, we do not need to worry about the preservation or preparing of foods. This is done almost automatically by our refrigerators, freezers, microwaves, and ovens. Even though we often take these things for granted, they do contribute a lot to what we can and can not eat. They give us a broader base of foods which we are able to possess. Another difference between food on the frontier and food today is that most families could only enjoy the foods which they were able to raise or produce on their own. There were no supermarkets or grocery stores for these people to go to to obtain any type of food that they wanted. Today, however anybody who has the money can go into a supermarket or grocery store to buy any item of food that they desire. Most people today rely on other people (farmers) to produce the foods that they will enjoy. They do not have to worry about producing or raising any food on their own. Finally, farming was the way of living in the frontier days. But today, it is only a hobby.

Holistic Analyses

Eighth- and eleventh-grade students' responses to the analytic task, Food on the Frontier, also were scored holistically to monitor trends in relative writing fluency. As FIGURE 1.2 shows, from 1984 to 1988, there was no significant change in the relative fluency of students' responses at either grade level. In both years, approximately 35 percent of the eighth graders and slightly more than half of the eleventh graders wrote informative papers that were judged as "better" in overall fluency in comparison to the total pool of papers written by students at that grade level (i.e., that received scores of 4, 5, or 6). Examples of papers receiving scores of "4" on the 6-point holistic scales for grades 8 and 11 are shown below.

Grade 8

Will we now have microwaves + alot of grocery stores. Its way easier. Also the food we now have is more exspanded. I meant that we have alot of food. Beause of farmers, producers markters, and many more things

Grade 11

The differences today from then are based on we have refrigeration now, we have a greater verities of foods, also there are differins types of foods that we eat

The refrigeration of food has helped a lot.

The different verities now helps because some food stay freshes longer.

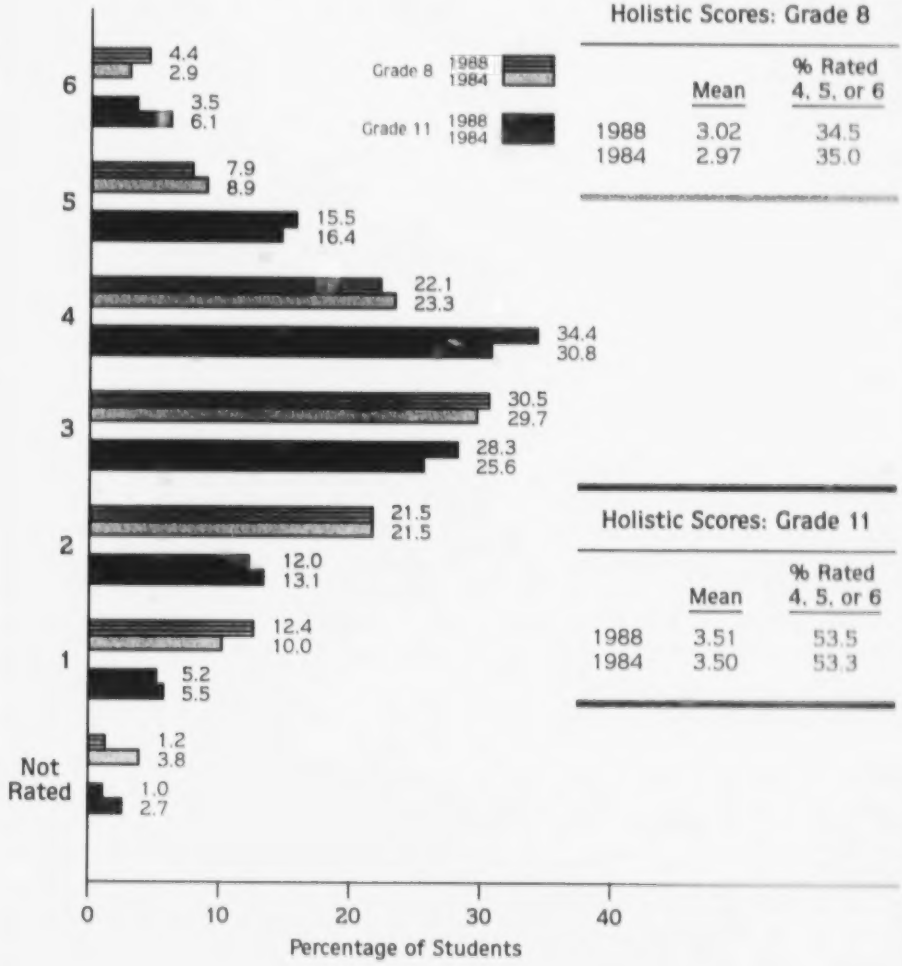
Also the different kinds of food we eat helps because we don't always eat the same foods day after day.

To sum up refrigeration, the different verieties as well as the different kinds of food we eat are the major reasons is the differences of food from today and then.

FIGURE 1.2

Trends in Fluency of Informative Writing at Grades 8 and 11: Holistic Scores for "Food on the Frontier" Task

THE NATION'S REPORT CARD



Holistic Scores: Grade 8

	Mean	% Rated 4, 5, or 6
1988	3.02	34.5
1984	2.97	35.0

Holistic Scores: Grade 11

	Mean	% Rated 4, 5, or 6
1988	3.51	53.5
1984	3.50	53.3

Note: No statistically significant difference between years at the .05 level. No significance test is reported when the proportion of students at a score point is less than 5. See Data Appendix for jackknifed standard errors.

Summary

In summary, trends in students' responses to these five informative writing tasks reveal little progress across time. In both 1984 and 1988, about two-thirds of the eleventh graders were able to write from personal experience and supply adequate information for a job application, but only slightly more than half were able to write an adequate newspaper report from given information.

For fourth and eighth graders, performance in 1988 was mixed on reporting tasks based on given information. Generally, the simpler and clearer the information provided, the more successful students were in summarizing and presenting it. More complex material required more complex writing strategies, which the majority of students seemed to lack. Between 1984 and 1988, changes in performance on these tasks were inconsistent. Of the tasks requiring students to report from given information, fourth graders improved on one (the Appleby House task). In contrast, eighth graders showed a decline on one of the two reporting tasks given at that grade level (XYZ Company).

Some improvements were found in analytic writing. For example, eighth graders in 1988 were more likely than those in 1984 to write an adequate or better report in response to the Food on the Frontier task, and eleventh graders were more likely to write responses that were judged minimal or better. However, no changes at either grade level were evident in students' relative fluency in response to this task. Also, in 1988, at grades 8 and 11, the percentage of students writing adequate or better responses remained quite low (13 to 14 percent).

CHAPTER TWO

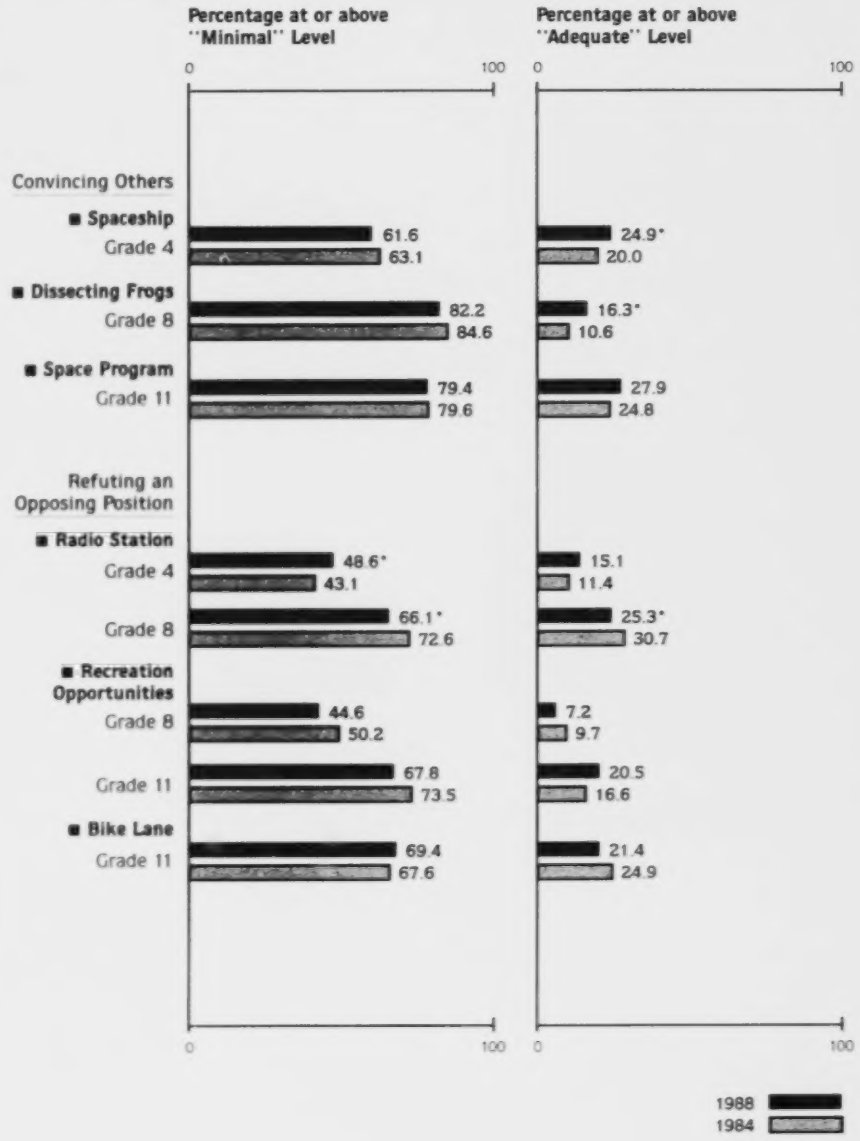
Trends in Persuasive Writing

PERSUASIVE WRITING IS primarily intended to influence — to change ideas or actions. It is used to convince others of a point of view or a course of action, to refute their opinions, and to defend certain positions or behaviors. Persuasive writing necessitates awareness of the characteristics of the reading audience and ways to influence them. We use persuasive writing in informal notes when we wish to convince a friend to go to one restaurant rather than another, as well as in formal critical essays when we present a tightly structured argument defending our preferred interpretation of a classic play. In all types of persuasive writing, both formal and informal, the writer must take a point of view and support or defend it.

Of the six persuasive tasks administered, three involved writing to convince others to adopt a particular point of view and the other three involved writing to refute an opposing position. Together these tasks reflect the kinds of writing engaged in to influence others and bring about change. FIGURE 2.1 presents information on trends in the percentages of students in each grade who performed at or above the minimal and adequate levels for each persuasive task.

FIGURE 2.1 | Trends in Persuasive Writing: Grades 4, 8, and 11

THE NATION'S REPORT CARD naep



* Shows statistically significant difference between years at the .05 level. See the Data Appendix for jackknifed standard errors and the Procedural Appendix for information on NAEP methods for computing standard errors.

Writing to Convince Others

"Spaceship" required fourth graders to form their own points of view about whether creatures from another planet should be allowed to return home or be detained for scientific study, and to support their points of view in ways that would convince others to agree with them.

"Dissecting Frogs" required eighth graders to take a stand on the dissection of frogs in science class, and to discuss and support their views.

"Space Program" required eleventh graders to adopt a point of view about whether or not funding for the space program should be reduced, and to write a letter to their senator explaining their position.

As indicated in Figure 2.1, in both 1984 and 1988 the percentage of students who provided adequate or better responses to these tasks was far smaller than the percentage writing minimal or better responses. Although they appeared able to understand the assignments and present their points of view, students were generally unable to support their ideas.

There were significant changes across time in students' performance on two of the three "convincing" tasks (Spaceship and Dissecting Frogs). On the Spaceship task, 25 percent of the fourth graders assessed in 1988 were able to take a stand and support it adequately, compared to only 20 percent who did so in 1984. Similarly, 16 percent of the eighth graders in 1988 wrote at least adequately about their views on frog dissection, compared to only 11 percent who did so in 1984.

Eleventh graders' performance remained relatively constant from 1984 to 1988 on the Space Program task, which asked them to write a persuasive letter expressing their views on funding for the space program. Trend results for the various levels of task accomplishment are presented in TABLE 2.1.

TABLE 2.1 Writing to Convince Others: Trends in the Percentage of Students at Each Level of Task Accomplishment

THE NATION'S REPORT CARD

	Not Rated	Unsatisfactory	Minimal	Adequate	Elaborated
Spaceship: Grade 4					
1988	5.2	33.2	36.7*	23.7	1.2
1984	6.9	30.0	43.1	19.7	0.3
Dissecting Frogs: Grade 8					
1988	0.8	16.9	65.9*	15.9*	0.4
1984	1.0	14.4	73.9	10.4	0.2
Space Program: Grade 11					
1988	3.2	17.5	51.5	26.9	1.0
1984	5.8	14.6	54.7	23.6	1.3

*Shows statistically significant difference between years at the .05 level. No significance test is reported when the proportion of students at a score point is less than 5. See Data Appendix for jackknifed standard errors.

An example of an unsatisfactory response to the Space Program task follows. Eighteen percent of the high-school juniors provided similar responses that did not take a clear point of view.

Dear Senator:

I think we should give funds to the Space program, but I do feel we have many problems already that we need to look out.
I dont think we should leave unfinished problems buhind.
I think the space program should work toward colonies but we shouldnt go ahead until we are ok here on our own planet.

Responses that were rated as minimal took a point of view, but did not present reasons for it, nor did they provide convincing evidence that would sway a senator's vote. The following is an example of such a paper.

Dear Senator:

I believe we have other problems on this planet which need to be solved first. I do believe money for this Space program should be cut. Why do we need permanent colonies in space? It is only useful to those who are astronauts or one's involved with the space. Our money could go for something better to benefit everyone.

Adequate responses supported the point of view presented with some reasoning or examples. In 1988, 27 percent of the students at grade 11 wrote such responses, as exemplified below.

Dear Senator:

I feel strongly against cuts in funds for the space program. The Space Program is an important part of our future. Space is one of our final frontiers. If money is needed for something, make a cut in the defense program. I believe it's more important to explore space than to be able to blow things away. If we fall behind in space exploration we might miss something vitally important. Lives have been lost in trying to explore space and those lives shouldn't be wasted. Seven people died on the space shuttle in an effort to explore space, and if the program ends their deaths were for nothing. Please avoid the cut in the space program. Thank you.

Sincerely,
A concerned citizen

The most successful papers, although rare, provided a well-organized argument with supporting evidence. The following is an example of an elaborated response.

Dear Senator:

I am writing in regards to the proposal for cuts in funding for America's space program. As a seventeen year old girl I can already see problems of today seriously effecting my future. The most serious problem in this

(continued)

country today is education. From this problem stems such others as unemployment and poverty; from these problems crime & violence. The poverty stricken of this country have no hope for their future -- no jobs because of lack of education. There are many teenagers in this country dropping out of school -- they do not realize the importance of their education. The point that I am trying to make, senator, is that money is needed for the Education System in the U.S. as well as the Space program. However, which is more important - and who is to decide? Personally, I feel very lucky to have obtained the education that I have. I have hope for my future and the ability to stand on my own & support myself. However, I feel I have an obligation to the less fortunate around me, to share with them, if nothing else, hope for their futures. I hope that some day they might make a living for themselves. Where does this all start? With education and discipline at a young age with qualified teachers and facilities. With government funds. What good will the Space program be if only half of the country can even read about it. It's a matter of priorities I suppose. Thank you for your time. I ask that you think about what I've said

Writing to Refute an Opposing Position

"Radio Station" required fourth and eighth graders to provide reasons why their class should be permitted to visit a local radio station despite the manager's specified concerns.

"Recreation Opportunities" required eighth and eleventh graders to take a stand on whether their town should purchase a railroad track or a warehouse as a recreation center and to defend their choice.

"Bike Lane" required eleventh graders to take a stand on whether or not a bike lane should be installed in their locality, and to refute the opposing view.

As was shown in Figure 2.1, the patterns of student performance on the "refuting" tasks in 1984 and 1988 were similar to those previously observed on the "convincing others" tasks. (TABLE 2.2 provides information on levels of task accomplishment for the "refuting" tasks.) Far more students wrote responses at or above the minimal level than at or above the adequate level, indicating their ability to take a stand but their inability to provide sufficient support to refute others' views. The trend data reveal fluctuations at all three grades in students' ability to perform the refuting tasks given. There was a significant increase in the percentage of fourth graders and a decrease in the per-

TABLE 2.2 Writing to Refute an Opposing Position: Trends in the Percentage of Students at Each Level of Task Accomplishment

THE NATION'S REPORT CARD

	Not Rated	Unsatisfactory	Minimal	Adequate	Elaborated
Radio Station: Grade 4					
1988	4.8	46.6	33.5	15.1	0.0
1984	6.9	50.0	31.7	11.3	0.1
Radio Station: Grade 8					
1988	0.6	33.4*	40.8	24.8*	0.4
1984	0.2	27.2	41.8	30.2	0.6
Recreation Opportunities: Grade 8					
1988	3.1	52.3	37.4	7.2	0.1
1984	2.2	47.6	40.5	9.6	0.2
Recreation Opportunities: Grade 11					
1988	2.9	29.3	47.3*	19.7	0.8
1984	0.6	26.0	56.8	16.3	0.3
Bike Lane: Grade 11					
1988	0.9	29.7	48.1	21.0	0.3
1984	1.7	30.7	42.7	24.3	0.6

*Shows statistically significant difference between years at the .05 level. No significance test is reported when the proportion of students at a score point is less than 5. See Data Appendix for jackknifed standard errors.

centage of eighth graders who wrote minimal or better responses to the Radio Station task. There was also a drop in the percentage of eighth graders who wrote adequate or better responses to this task. In 1988, more than three-quarters of the high-school students remained unable to write papers that were adequate or better in response to either the Recreation Opportunities task or the Bike Lane task, and nearly one-third were unable to write papers at the minimal level or better.

Substantial proportions of students wrote unsatisfactory responses — primarily because these responses did not even take a stand, let alone support it.

Minimal responses to the Bike Lane task reflected students' inability to appeal to their audience. These papers tended to state students' views and sometimes provided elaboration, but did not construct a persuasive argument. The following is such an example.

Dear Council Members:

I am writing to support the proposal for the bike lanes. It would be a benefit to society and our community to have these special lanes.

Riding bicycles will reduce the amount of pollution, increasing the health and appearance of our city. Although it would decrease the area for parking it would not be a problem because more people would be riding bicycles and would not need a parking space.

Business would increase because the safety of bicycle riding would be guaranteed. Automobile accidents would be less likely to occur.

The majority of people would benefit from this proposal both from saving money on gasoline and getting exercise to improve their health. These are a few reasons I feel the proposal has to be passed.

As illustrated by the following example, papers judged as adequate took a stand for or against the proposal and also briefly refuted some aspect of the opposing ideas.

Dear Council Members:

I do not feel it is necessary to create bicycle lanes on major streets. People need places to park. Even though some could ride a bike, many could not. Many people do not have bikes, cannot ride bikes or are dissabled. Plus bike riding is seasonal. You can't ride a bike through the winter.

It may be safer and easier, but many bikers like to ride with the traffic. Those that don't can ride through the park where there is already a lane or on the sidewalks.

Instead of taking away parking altogether, maybe we should consider expanding our streets just a little to make room for bikers. These lanes need not be the size of the regular lanes but merely a couple feet wide.

Although the workers can ride their bikes, many customers cannot. These businesses are for the customers and we need to be aware of that. We cannot inconvenience 95% of the people who drive or have to drive for the 5% that ride their bikes. Rather we should make a little extra for this small population.

Sincerely,

Elaborated papers went beyond arguing for a particular point of view to presenting an interrelated set of reasons to support students' positions; they also responded to the explicit concerns of their opponents. The following is an example of such a response.

Dear Council Members:

In regard to your stand on the issue of street bicycle lanes, I would like to make a few proposals. These proposed lanes are very much needed by the city for safety improvements for cyclists as well as pedestrians. These proposed lanes would allow cyclists to travel more freely throughout the downtown area with a new sense of security in regard to passing autos. Pedestrians would as well benefit from this change in that disabled persons and those parents with baby strollers would be free from worry of being run into and possibly seriously damaged by the cyclists who would be freed to use sidewalks. One may view this stand with opposition by saying that businesses would suffer from lack of sufficient parking.

However, this dispute may easily be settled through several other possibilities. One would be to establish parking areas behind businesses. Another would be to construct a public parking lot in a nearby area, allowing motorists to park nearby and walk to the stores. In consequence of not building bike lanes, those now parking next to stores must be on the watch for cyclists passing by. So these problems would solve themselves if these bike lanes are constructed. If not satisfied with these arguements, others still exist. A compromise may be brought about in which the lanes are constructed with several parking zones throughout the stretch of these lanes.

(continued)

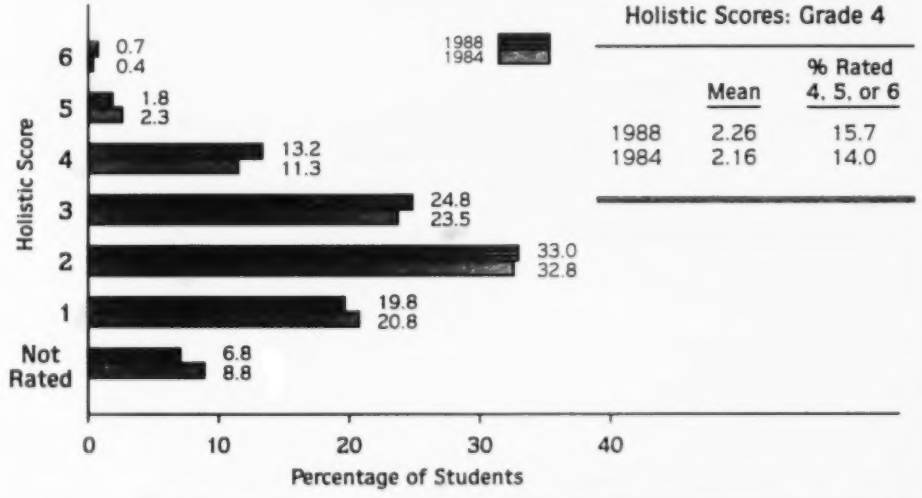
This problem must be solved. A decision must be made for or against, and as that which was illustrated in this letter, one side must overweigh the other. Please reconsider your position, for there are two sides to an issue. Thank you for your consideration.

Holistic Analyses

Fourth-grade students' responses to the Spaceship task and eighth- and eleventh-grade students' responses to the Recreation Opportunities task were analyzed holistically to evaluate differences in students' relative fluency in persuasive writing. As FIGURE 2.2 indicates, the relative fluency of fourth graders' responses remained fairly constant from 1984 to 1988. The relative fluency of eighth and eleventh graders' responses, on the other hand, showed significant improvement.

FIGURE 2.2 Trends in Fluency of Persuasive Writing at Grade 4: Holistic Scores for "Spaceship" Task

THE NATION'S REPORT CARD



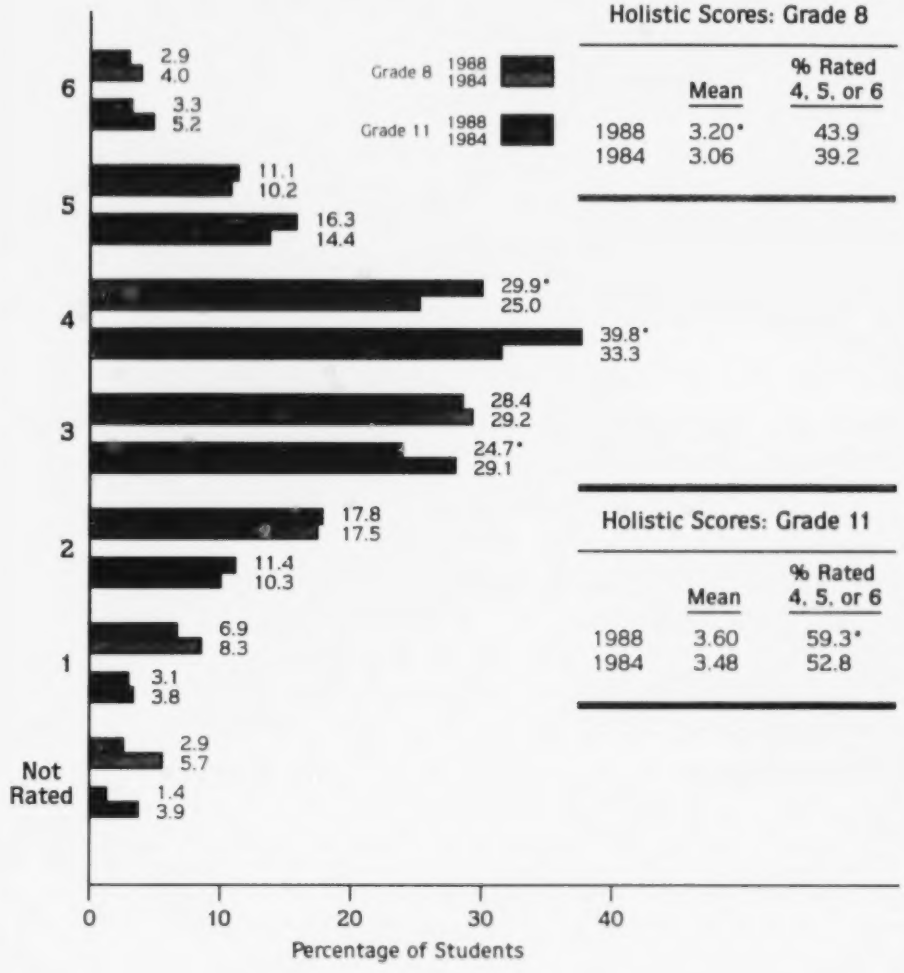
Holistic Scores: Grade 4

	Mean	% Rated 4, 5, or 6
1988	2.26	15.7
1984	2.16	14.0

FIGURE 2.2
(continued)

Trends in Fluency of Persuasive Writing at Grades 8 and 11: Holistic Scores for "Recreation Opportunities" Task

THE NATION'S REPORT CARD



Holistic Scores: Grade 8

	Mean	% Rated 4, 5, or 6
1988	3.20*	43.9
1984	3.06	39.2

Holistic Scores: Grade 11

	Mean	% Rated 4, 5, or 6
1988	3.60	59.3*
1984	3.48	52.8

* Shows statistically significant difference between years at the .05 level. No significance test is reported when the proportion of students at a score point is less than 5. See Data Appendix for jackknifed standard errors.

The following letter about whether space creatures should be allowed to return home (Spaceship task) was given a relative rating of "4" on the 6-point holistic scale.

Grade 4

Dear Director:

I think we should study them. Because so we could know what they do. And then we bring them back.

Following are examples of eighth and eleventh grade persuasive papers holistically rated as "4". These papers were written in response to the Recreation Opportunities task requiring students to elaborate on why the town should purchase an abandoned warehouse or railroad track.

Grade 8

Dear Ms Jones:

I'm really glad we have enough money to purchase either the ~~abes~~ old railroad track or ~~the~~ the abandoned warehouse. I'm in favor of purchasing the abandone warehouse because of what my daughter tells me alot of her friends like to dance. So I think you should purchase it because we can make it into a dance studio. Then off to the side we can have a few video games.

Concerned parent,

Mrs. Joseph

Grade 11

Dear Ms ?:

The fact that the recreation department in Blythe has been given enough money to create some new recreational opportunities is great. I think our younger generations need more to do and there is not very much for a young person or teenager to do, without going 10 miles away. I really think its a great idea.

Also I would prefer it if you bought the old Warehouse, there is so much more you could do with the warehouse. You could clean it fix it up and redecorate it. You could make it into a video arcade, thats what

Summary

In both 1984 and 1988, a majority of the students at all three grade levels were able to write at least minimal responses to most of the persuasive tasks. Far fewer students, however, wrote at the adequate level, which required supporting points of view with evidence and reasoning.

Two types of persuasive writing tasks were included in the assessment: those that asked students to convince others to adopt a point of view and those that required them to refute an opposing point of view. For the "convincing" tasks in 1988, both fourth and eighth graders showed significant improvement in the percentage of responses judged adequate or better. Eleventh graders also improved on this type of task, although not significantly so. Even in 1988, however, adequate or better performance was demonstrated by only 16 to 28 percent of the students across the three grade levels.

Fourth graders also showed improvement in refutation, with significantly more students providing minimal or better responses in 1988 than in 1984. Eighth-grade students, however, declined significantly on one of their two refutation tasks. Whereas 73 percent of the students in 1984 were able to write a convincing letter about visiting a radio station, only 66 percent did so in 1988. No significant change in performance was evident on the other refutation task given to students at grade 8 or on the two tasks of this nature given at grade 11. Even at grade 11, four-fifths of the students did not respond adequately to the "refuting" tasks in either assessment.

In viewing responses to the six persuasive tasks overall, it appears that fourth graders were somewhat better persuasive writers in 1988 than they were in 1984, eighth graders were better at convincing and somewhat worse at refuting, and eleventh graders remained approximately the same in both kinds of persuasive writing. In addition, both eighth and eleventh graders did show increased fluency on one of their refutation tasks. Taken together, these trend results indicate that some progress has been made across time. However, equally striking in these findings is that in 1988, a vast majority of high-school juniors still could not write a persuasive paper that was judged adequate to influence others or move them to action.

CHAPTER THREE

Trends in Imaginative Writing

IMAGINATIVE WRITING ALLOWS us to participate in the literary experience. When engaging in imaginative writing, we step into a visionary world of ideas, images, and sounds. Whether writing personal stories of pain and triumph or fictional tales of interplanetary visits, the goal is to create a momentary reality that is apart from the everyday. As with the other types of writing, imaginative writing can be more or less formal, academic, or complex.

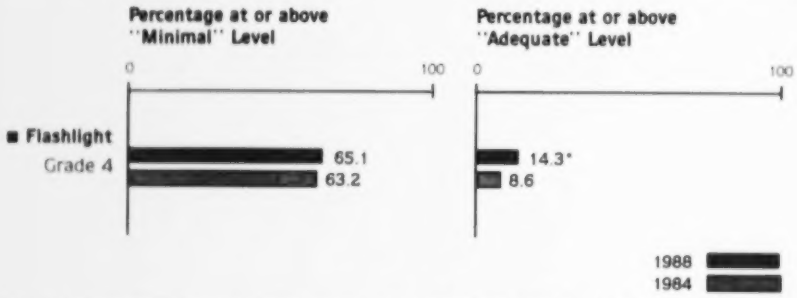
The following imaginative writing task was presented at the fourth-grade level in the 1984 and 1988 writing trend assessments.

"Flashlight" required fourth graders to write a story about their imagined adventures with a flashlight that had special powers.

The percentages of students who wrote papers that were judged minimal or better and adequate or better in 1984 and 1988 are provided in FIGURE 3.1.

FIGURE 3.1 | Trends in Imaginative Writing: Grade 4

THE NATION'S REPORT CARD



* Shows statistically significant difference between years at the .05 level. See the Data Appendix for jackknifed standard errors and the Procedural Appendix for information on NAEP methods for computing standard errors.

Fourth graders found it difficult to write well-developed stories. In 1984, 55 percent of these young students seemed to grasp the basic elements of storytelling, but only 9 percent were able to develop their stories successfully. The 1988 data indicate progress in storywriting, however, as 14 percent of the students were able to write at the adequate level or better — a significant increase. The percentage of responses judged minimal or better did not change across the four-year period.

The trend results for each level of task accomplishment for this storytelling task are presented in TABLE 3.1. They reflect the rise in adequate papers in 1988, but also reveal that only a handful of fourth graders wrote elaborated narratives.

TABLE 3.1 | Imaginative Writing: Percentage of Students at Each Level of Task Accomplishment

THE NATION'S REPORT CARD

	Not Rated	Unsatisfactory	Minimal	Adequate	Elaborated
Flashlight: Grade 4					
1988	1.7	33.2	50.9	13.8*	0.4
1984	0.9	35.9	54.6	8.5	0.1

*Shows statistically significant difference between years at the .05 level. No significance test is reported when the proportion of students at a score point is less than 5. See Data Appendix for jackknifed standard errors.

In 1988, one-third of the students in grade 4 did not tell a story in response to the Flashlight task. The following is typical of these unsatisfactory responses.

I would turn on the flashlight and see what the powers were. If they were important I would go to the person & left it there address and give it back

Students providing responses at the minimal level seemed to understand the imaginative character of the Flashlight task, but were unable to carry it out. At this level, students attempted a story, but provided only a bare outline with little detail. Sometimes they rambled or offered lists of details or events, with no point or organization. The following is an example of a paper rated as minimal.

One day I was in my room, When my mom came in. There was a praesant in her hand, It was for me! Oboy, it was heavey. I opened it, It was a flashlight! But it was powerful. I held on to it, But all of a sudden it picked me up me and my flashlight went out the windowr. I was TOO stories up in the air. I was very, very dizzey. We started to come down and down.

The following is an example of an adequate paper. This type of response reflected the storyteller's obligation to develop a plot and elaborate it with details, including events, characters, and setting. However, the plots tended to be thin or inconsistently developed.

I took the Flash light and
waited till dawn then I asked
my mom if I could go camping
with my friends. We set out
that night and found a camp spot
We went exploring in the woods.
We heard somthing coming. It sounded
like something like a dog.
But is was a Wolf! I took the
flashligh I found to get a better
look but when saw it It was
turned to stone. So we had no
light to get back because if I
accendly shined it on one of my
friens they would turn to stone
to. So that the story about
"The
Magic
Flashlight"

In contrast, the most successful stories developed clear and consistent situations and explicitly indicated the writer's attitudes and feelings. Elaborated papers offered a plot with appropriate details, as in the following example.

I Picked up the flash light, I said to myself "what does this button do" and all of a sudden a million dollers were on the floor. I tolled my mom and dad and they called out were rich!!! then I tolled them how it workes. They looked at me and said "How did you ever find this and I tolled them I found it on the floor. after that we had dinner. After dinner I went ofer to the flash light and pressed a diffrent button then a billion dollers apeared. it was like nothing I ever saw. It was 8 O'clock and I had to go to bed. Then next morning when I woke up the flashlight was gone. In place of the flash light was a note the note said "you've had your fun for once I took the flashlight back don't try to find it or you'll get a wuck. Then I showed mom and dad the note. They told me to foget about it but I couldn't. So I got washed and dressed and started lookin for it I looked everywere but I couldn't find it. I went back inside and had a snack then I remembered the note it said only 24 hours I can have it. Then I told mom and dad about it and the said to me "Thats all right your our real treasure.

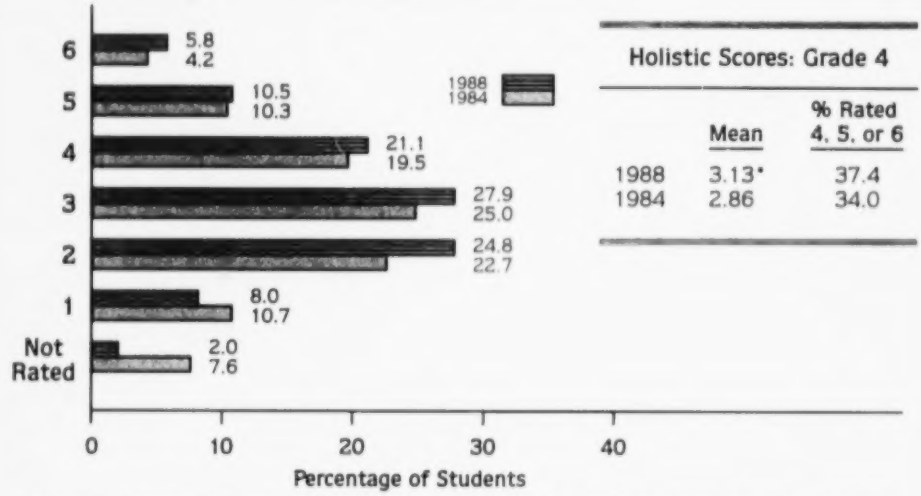
The End

Holistic Analyses

As shown in FIGURE 3.2, the relative fluency of fourth graders' written responses to the Flashlight task improved significantly between 1984 and 1988. The percentage of responses that were judged relatively better was also higher in 1988 than in 1984, but the difference was not statistically significant.

FIGURE 3.2 Trends in Fluency of Imaginative Writing at Grade 4: Holistic Scores for "Flashlight" Task

THE NATION'S REPORT CARD



Holistic Scores: Grade 4

	Mean	% Rated 4, 5, or 6
1988	3.13*	37.4
1984	2.86	34.0

* Shows statistically significant difference between years at the .05 level. No significance test is reported when the proportion of students at a score point is less than 5. See Data Appendix for jackknifed standard errors.

Although fourth-grade students had difficulty writing well-developed stories, there was a significant increase between 1984 and 1988 in the percentage of students who wrote at the adequate level or better.

The following is an example of a "Flashlight" story rated as "4" on the 6-point holistic scale.

One day I was playing with the unusual flash light. Then it fell into the street a big truck almost hit it but it hit the curb and turned itself on. The unusual flashlight stoped time & went back to get in and turned it off. Time went again. Another day I got mad and threw the flashlight in my neibrs back yard. Then dog caught it and brang it back to me. But the dog was glowing. The dog got the flashlights powers. When the dog ran back he didnit jump over the wall he went threw it. They were gonna give him away. The gave him to me. I was glad I got him because I knew how to control the powers.

Summary

Although fourth-grade students had difficulty writing well-developed stories, there was a significant increase between 1984 and 1988 in the percentage of students who wrote at the adequate level or better. There was also significant improvement in the overall fluency of the students' writing (based on the same Flashlight task). In 1988, 65 percent of the students at grade 4 performed at the minimal level or better, providing responses that at least attempted the basic task of storytelling. Fourteen percent were able to develop their stories, structuring a plot and supplying appropriate details.

However, similar to the results for informative and persuasive writing, the levels of achievement were relatively low.

CHAPTER FOUR

Trends in Average Writing Performance

TO COMPARE OVERALL writing performance across time and to examine the performance of subgroups, NAEP used the Average Response Method (ARM) to estimate how well the students in each grade would have done if they had taken 11 of the 12 writing tasks included in the trend assessment.[6] Data on the average writing achievement of students in grades 4, 8, and 11 were summarized on a common scale that ranges from 0 to 400.

The national results in TABLE 4.1 reveal no statistically significant changes in average writing performance at grades 4 and 11 from 1984 to 1988, and a significant decline at grade 8.

TABLE 4.1 National Trends in Average Writing Proficiency

THE NATION'S REPORT CARD

Grade	Year	Average Proficiency
4	1988	173.3 (1.3)
	1984	170.5 (1.7)
8	1988	208.2 (0.8)*
	1984	212.4 (1.4)
11	1988	220.7 (1.2)
	1984	223.0 (2.1)

*Shows statistically significant difference between years at the .05 level. Jackknifed standard errors are presented in parentheses.

[6]Of the 12 tasks in the trend assessment, one task on which fourth-grade students showed significant improvement — the imaginative task, Flashlight — could not be included in the ARM analysis because it was administered to separate samples of students. Further information is provided in the Procedural Appendix.

The following tables summarize trends in average writing proficiency for various demographic subgroups. In viewing these trends, it should be noted that the distributions of performance overlap considerably for the populations being compared. For example, some males were among the best writers and some females were among the poorest writers. (Distributions for subgroups of students are included in the Data Appendix.)

TABLE 4.2 displays the differing trends in average performance for subgroups defined by race/ethnicity and gender. Changes in performance for White students most closely resemble the national profile, with a significant decline at grade 8 between 1984 and 1988 and no significant changes at grades 4 or 11. The average writing proficiency of Black and Hispanic students remained stable across time at all three grades. As a result, the performance gap between these minority students and their White counterparts was reduced slightly at grade 8 and unchanged at the other grades. The results indicate that overall, the gap in writing performance between these minority students and their White counterparts remained large. In 1984 and 1988, Hispanic and Black eleventh graders wrote less well than their eighth-grade White counterparts.

In the results by gender, females at all grades performed noticeably better than males. Between 1984 and 1988, the average writing performance of fourth-grade girls increased significantly, while the performance of boys remained essentially the same. At grade 8, males' writing proficiency declined while females' did not. Eleventh graders' writing performance remained the same across the four-year period for both males and females. These patterns served to slightly increase females' average advantage at grades 4 and 8.

TABLE 4.2 Trends in Average Writing Proficiency by Race/Ethnicity and Gender

THE NATION'S REPORT CARD

Race/Ethnicity	Year	Average Proficiency Grade 4	Grade 8	Grade 11
White	1988	180.0 (1.6)	213.1 (1.0)*	225.3 (1.3)
	1984	177.2 (1.9)	217.9 (1.5)	229.1 (2.1)
Black	1988	150.7 (3.1)	190.1 (2.3)	206.9 (2.6)
	1984	148.2 (4.0)	188.3 (4.1)	204.2 (4.1)
Hispanic	1988	162.2 (3.6)	197.2 (3.2)	202.0 (3.2)
	1984	157.9 (4.5)	194.2 (6.9)	200.6 (4.6)
Gender				
Male	1988	164.3 (1.9)	197.9 (1.4)*	211.1 (1.5)
	1984	165.0 (2.7)	204.5 (2.4)	211.9 (3.0)
Female	1988	182.4 (1.6)*	218.2 (1.1)	229.2 (1.4)
	1984	176.7 (1.9)	220.5 (1.5)	234.5 (2.4)

*Shows statistically significant difference between years at the .05 level. Jackknifed standard errors are presented in parentheses.

TABLE 4.3 summarizes overall performance by region. Between 1984 and 1988, writing performance in the Northeast remained unchanged at grades 4 and 11 and declined significantly at grade 8. This decline appeared to eliminate the previous advantage held by eighth graders in the Northeast over their counterparts in the other three regions of the country. In the Southeast and West, students showed slight fluctuations in performance across time, although none of the gains or losses was significant. In the Central region, writing performance improved significantly at grade 4 and remained steady at grades 8 and 11.

TABLE 4.3 Trends in Average Writing Proficiency by Region

THE NATION'S REPORT CARD

Region	Year	Average Proficiency Grade 4	Grade 8	Grade 11
Northeast	1988	174.8 (4.0)	209.3 (1.9)*	224.5 (2.9)
	1984	179.1 (2.7)	219.5 (4.2)	226.3 (2.6)
Southeast	1988	171.3 (2.6)	209.7 (2.0)	221.3 (1.6)
	1984	168.7 (4.0)	211.8 (2.0)	222.1 (4.4)
Central	1988	178.2 (1.9)*	204.3 (2.5)	218.8 (3.1)
	1984	169.4 (3.3)	208.6 (1.8)	225.1 (2.4)
West	1988	169.8 (2.9)	209.6 (2.1)	219.1 (1.9)
	1984	166.8 (3.8)	210.5 (3.2)	218.2 (3.2)

*Shows statistically significant difference between years at the .05 level. Jackknifed standard errors are presented in parentheses.

Summary

The results of NAEP's analysis of trends in average writing achievement from 1984 to 1988 reveal few dramatic shifts. There were no significant changes in overall writing proficiency at grades 4 and 11. However, the average proficiency of eighth-grade students dropped significantly. In examining the achievement trends for various subpopulations, it appears that performance declines among White students, males, and students from the Northeast region contributed to the national decline at grade 8. In addition, females and students from the Central region showed a significant increase in writing proficiency at grade 4. Black and Hispanic students tended to show consistent improvements at all three grade levels, although the changes were not statistically significant. Differences in average proficiency between subgroups remained strong at all three grade levels in both assessments, with females outperforming males and White students outperforming Black and Hispanic students.

CHAPTER FIVE

Trends in Grammar, Punctuation, and Spelling

TO EXAMINE STUDENTS' ability to adhere to the conventions of written English, one task at each grade was selected for further analysis. The tasks chosen were Spaceship at grade 4 and Recreation Opportunities at grades 8 and 11. Nationally representative subsamples of papers were drawn from the total national sample to permit a detailed analysis of writing mechanics; in addition to measures of overall quality, each paper was analyzed for a variety of aspects of spelling, word choice, punctuation, and syntax. Details on the mechanics scoring procedures are provided in the Procedural Appendix.

Trends in Overall Characteristics of the Papers

As children gain control of written English, they should be able to use a larger number of words in a growing number of sentences, with relatively greater ease and fewer errors. TABLE 5.1 summarizes trends in the general characteristics of the papers at each grade. (Since the fourth-grade data are based on a different writing task, comparisons of the results for grade 4 to those for grades 8 and 11 are not appropriate.) In addition to means and standard errors for each measure, the table includes percentiles to show how these characteristics were distributed. For example, the 25th percentile for number of words per paper estimates the number of words that was exceeded by 75 percent of the population, but not exceeded by the remaining 25 percent.

At all three grades, papers written in 1988 were slightly longer than those written in 1984, although none of the changes observed was significant. As expected, the length of students' papers increased steadily across the grades. In 1988, eleventh graders wrote more

TABLE 5.1

Trends in the Characteristics of Papers for the Nation

THE NATION'S REPORT CARD

		Year	Mean	Percentiles 25th	50th	75th	90th
Number of words	Grade 4	1988	36.2 (1.6)	19.4	31.6	46.8	63.8
		1984	33.5 (1.0)	20.0	29.7	41.2	60.3
	Grade 8	1988	70.9 (2.4)	44.4	65.0	94.1	120.2
		1984	66.6 (1.9)	40.2	57.8	87.3	118.1
	Grade 11	1988	96.4 (2.5)	62.9	92.0	123.2	156.9
		1984	92.6 (2.4)	57.9	83.2	122.5	157.3
Word length	Grade 4	1988	4.0 (0.1)	3.7	4.0	4.3	4.5
		1984	3.9 (0.1)	3.7	4.0	4.3	4.5
	Grade 8	1988	4.1 (0.1)	3.7	4.0	4.3	4.5
		1984	4.1 (0.1)	3.8	4.0	4.3	4.6
	Grade 11	1988	4.3 (0.1)	3.8	4.2	4.6	5.1
		1984	4.3 (0.1)	3.8	4.2	4.6	5.2
Number of sentences	Grade 4	1988	2.8 (0.2)	1.3	2.3	3.7	5.2
		1984	2.7 (0.1)	1.3	2.2	3.4	5.1
	Grade 8	1988	5.3 (0.3)	2.7	4.4	6.9	9.2
		1984	4.7 (0.3)	2.3	3.9	6.0	8.4
	Grade 11	1988	6.1 (0.2)	3.9	5.6	7.4	10.0
		1984	5.7 (0.2)	3.5	5.2	7.3	10.2
Number of words per sentence	Grade 4	1988	15.2 (0.6)	9.1	12.4	17.6	27.0
		1984	14.8 (0.4)	9.3	12.6	17.9	25.2
	Grade 8	1988	16.6 (0.5)	11.7	14.4	17.9	24.3
		1984	17.1 (0.4)	12.3	15.2	18.9	26.6
	Grade 11	1988	17.8 (0.4)	14.1	16.8	19.6	24.3
		1984	18.1 (0.5)	13.8	16.1	20.2	25.5
Number of errors	Grade 4	1988	5.2 (0.3)	2.2	4.0	6.9	10.4
		1984	4.9 (0.2)	2.0	3.8	6.4	10.4
	Grade 8	1988	7.0 (0.5)	2.8	5.4	8.7	12.5
		1984	6.3 (0.5)	2.4	4.4	7.8	12.2
	Grade 11	1988	6.0 (0.5)	2.3	4.6	7.4	11.6
		1984	6.1 (0.2)	2.9	4.8	7.7	12.6
Error rate	Grade 4	1988	17.7 (1.4)	7.6	13.2	21.4	36.9
		1984	16.9 (0.7)	7.3	13.5	21.1	32.9
	Grade 8	1988	11.8 (1.3)	4.7	8.4	13.9	19.6
		1984	10.5 (0.9)	4.5	7.5	12.4	18.7
	Grade 11	1988	8.1 (1.1)	2.8	5.0	8.3	12.8
		1984	7.7 (0.4)	3.5	6.0	9.8	14.2

Note: No statistically significant difference at the .05 level. Jackknifed standard errors are presented in parentheses. Data for grade 4 are based on a different writing task than data for grades 8 and 11.

than two and a half times as many words and twice as many sentences to the Recreation Opportunities task as fourth graders did to the Spaceship task. Word length (an index of vocabulary) and average number of words per sentence (an index of sentence complexity) showed no changes between 1984 and 1988 at any of the three grades.

The total number of errors and the number of errors per 100 words also showed no change at any grade across the four-year period. The distribution of errors across the percentiles in both assessment years indicates that most students made some errors, and it seems reasonable to expect this in first-draft writing. It may be that error rates would be even lower if students were given more time to look for and correct their errors.

The Data Appendix contains the results summarizing trends for papers that were rated "adequate or better" or "minimal or below" in task accomplishment, and for those that were rated "4, 5, or 6" or "1, 2, or 3" in relative fluency. The less effective papers in task accomplishment at grade 8 showed a significant increase in both the number of sentences and the number of errors, while at both grades 4 and 8, the more effective papers showed a decrease in the number of errors per 100 words. The more effective papers at grade 8 also showed a significant increase in the number of words. There were no significant shifts at any grade level in the characteristics of papers rated higher or lower in relative fluency.

Trends in Control of Sentence Structure

Students' control of syntax is reflected in the types of errors that surface in the sentences they create. To examine changes across time in students' command of sentence structure, four types of sentence errors — run-ons, fragments, awkward sentences, and sentences with agreement errors — were marked in the 1984 and 1988 papers.

As shown in TABLE 5.2, there were no significant changes across time at any grade in the percentage of papers containing run-on sentences, sentences with agreement errors, or fragments. In both years, the frequency of these errors across the percentiles indicates that they were relatively uncommon. Half of the papers at grade 4 contained no run-on sentences, and 75 percent contained no fragments or sentences with agreement errors. At grades 8 and 11, three-quarters of the papers contained virtually none of these types of errors.

Awkward sentences appeared to be a more pervasive problem at all three grades, however. In 1988, 38 percent of the sentences in eighth graders' papers were considered awkward — a significant increase since 1984. In comparison, at grade 11, the percentage of awkward sentences decreased across time, from 31 to 24 percent. At grade 4, the percentage of these sentences dropped slightly across time, but the change was not significant.

The trends in sentence errors for good and poor papers revealed no consistent themes (see Data Appendix). In the eighth-grade papers that were rated good in task accomplishment, run-on sentences and sentences with agreement errors were less common in 1988 than in 1984; however, there was a rise in the percentage of awkward sentences in the more fluent papers at this grade. In the eleventh-grade papers that were rated poor in task accomplishment, awkward sentences were less common in 1988 than in 1984. There were no significant changes across time in the frequency of sentence errors in the good or poor papers written by fourth graders.

. . . It is clear that most students were able to control the conventions of written English.

TABLE 5.2

Trends in Sentence Errors for the Nation

THE NATION'S REPORT CARD

		Year	Mean	Percentiles 25th	50th	75th	90th
Percentage run-on sentences							
	Grade 4	1988	17.0 (2.0)	0.1	0.2	24.3	67.3
		1984	15.8 (1.5)	0.1	0.2	24.8	50.3
	Grade 8	1988	8.4 (1.3)	0.1	0.1	0.4	32.6
		1984	7.3 (0.8)	0.1	0.1	0.5	25.3
	Grade 11	1988	4.1 (0.9)	0.1	0.1	0.4	14.4
		1984	4.9 (0.7)	0.1	0.1	0.4	20.1
Percentage sentence fragments							
	Grade 4	1988	5.0 (1.0)	0.1	0.1	0.4	24.8
		1984	3.3 (0.5)	0.1	0.1	0.3	10.5
	Grade 8	1988	4.0 (0.6)	0.1	0.1	0.4	16.9
		1984	3.7 (0.6)	0.1	0.1	0.4	16.9
	Grade 11	1988	2.9 (0.5)	0.1	0.1	0.4	14.1
		1984	3.2 (0.4)	0.1	0.1	0.4	14.8
Percentage sentences with agreement errors							
	Grade 4	1988	3.3 (0.6)	0.1	0.1	0.3	3.5
		1984	4.1 (0.7)	0.1	0.1	0.3	7.6
	Grade 8	1988	3.2 (0.6)	0.1	0.1	0.4	11.7
		1984	3.4 (0.6)	0.1	0.1	0.4	12.1
	Grade 11	1988	2.4 (0.4)	0.1	0.1	0.3	7.7
		1984	3.0 (0.5)	0.1	0.1	0.3	10.0
Percentage awkward sentences							
	Grade 4	1988	31.0 (2.5)	0.1	16.6	50.2	99.9
		1984	24.8 (2.1)	0.1	10.4	49.5	99.8
	Grade 8	1988	37.8 (1.8)*	0.6	32.9	50.4	99.7
		1984	32.1 (1.5)	0.3	25.3	49.9	99.6
	Grade 11	1988	23.9 (1.4)*	0.2	17.1	37.1	59.8
		1984	31.3 (1.7)	0.5	25.0	49.8	74.7

*Shows statistically significant difference between years at the .05 level. Jackknifed standard errors are presented in parentheses. Data for grade 4 are based on a different writing task than data for grades 8 and 11.

Trends in Control of Word-Level Conventions

Students' control of word-level conventions is reflected in their spelling, capitalization, and word choice errors, which are summarized in TABLE 5.3.

TABLE 5.3 Trends in Word-Level Errors for the Nation

THE NATION'S REPORT CARD

	Year	Mean	Percentiles			
			25th	50th	75th	90th
Percentage misspelled words						
Grade 4	1988	9.1 (0.7)	2.3	6.6	12.3	22.8
	1984	8.6 (0.5)	2.3	6.7	12.3	18.9
Grade 8	1988	4.3 (0.3)	0.7	2.9	5.9	9.6
	1984	3.9 (0.3)	0.4	2.7	5.2	9.4
Grade 11	1988	2.3 (0.3)	0.3	1.4	2.9	5.0
	1984	2.4 (0.2)	0.4	1.6	3.5	6.1
Percentage word-choice errors						
Grade 4	1988	0.6 (0.1)	0.1	0.1	0.1	0.1
	1984	0.8 (0.1)	0.1	0.1	0.2	0.2
Grade 8	1988	0.9 (0.1)	0.1	0.1	0.2	0.2
	1984	0.8 (0.1)	0.1	0.1	0.2	0.2
Grade 11	1988	0.7 (0.1)	0.1	0.1	0.2	0.2
	1984	0.7 (0.1)	0.1	0.1	0.1	0.1
Percentage capitalization errors						
Grade 4	1988	0.8 (0.3)	0.1	0.1	0.3	1.5
	1984	0.8 (0.1)	0.1	0.1	0.4	1.9
Grade 8	1988	0.6 (0.2)	0.1	0.1	0.4	0.8
	1984	0.6 (0.2)	0.1	0.1	0.3	0.5
Grade 11	1988	0.4 (0.2)	0.1	0.1	0.3	0.5
	1984	0.2 (0.1)	0.1	0.1	0.3	0.5

Note: No statistically significant difference between years at the .05 level. Jackknifed standard errors are presented in parentheses. Data for grade 4 are based on a different writing task than data for grades 8 and 11.

Across the grades, the percentages of misspelled words in students' papers were comparable in 1984 and 1988. Students in grade 4 misspelled an average of 9 percent of the words they used, and even the better spellers (the 25 percent whose papers had the fewest misspellings) misspelled up to 2 percent of their words. At grade 11, students averaged

only 2 percent misspellings overall, and the best spellers had reduced their spelling errors to less than 1 percent. Errors in word choice and capitalization were rare across the grades, and there were no significant changes in the rate of these errors between 1984 and 1988. In the Data Appendix, these data are presented separately for papers rated as "good" and "poor." At grade 4, spelling improved significantly across time in the more effective papers. As with the results for students' papers overall, errors in capitalization and word choice were relatively rare in both "good" and "poor" papers.

Trends in Control of Punctuation

Punctuation was analyzed in terms of both the particular marks that students used correctly or incorrectly and the marks that should have been used when punctuation was omitted. Trends in punctuation uses and omissions are summarized in TABLE 5.4 for the nation and percentiles.

The patterns of punctuation errors found in the 1988 papers were comparable to those found in the 1984 papers. In general, most students made few errors in punctuation, though the 10 percent most error-prone papers had 4 or more punctuation errors per 100 words, even at grade 11. Students were much more likely to omit a punctuation mark than to use a particular mark incorrectly.

In examining trends in punctuation errors across the grades for good and poor papers (see Data Appendix), the pattern of changes appears inconsistent. At grades 4 and 8, less effective and more effective papers included approximately the same number of punctuation errors and omissions per 100 words in 1988 as in 1984. At grade 11, however, the more effective papers appeared to deteriorate slightly in their use of punctuation, with more omissions and total errors per 100 words.

Trends in Subgroup Performance

In addition to studying trends in writing mechanics for the nation, NAEP examined trends in the performance of subgroups defined by race/ethnicity and gender.[7] For the most part, the changes across time in subgroup performance paralleled those for the nation as a whole, though with some variations in which groups showed the most change. These results are found in the Data Appendix. Trends in the overall characteristics of the papers — in spelling, word choice, capitalization, and punctuation — are of particular interest.

General Characteristics of the Papers. Black eleventh graders assessed in 1988 wrote responses that were significantly longer than those written by their counterparts in 1984, as reflected in the number of words generated. However, there was also a significant increase in the number of sentences they wrote and a decrease in the length of their sentences. There were no significant changes from 1984 to 1988 in the overall characteristics of papers written by Black fourth or eighth graders, nor by White students at any grade.

The trends for males and females appeared similar. The only significant change found for these groups was an increase in the length of responses for eighth-grade females.

At all grades and in both years, Black students tended to write fewer words than White students; at grades 8 and 11, they also wrote fewer sentences. The differences at grade 11 were reduced across time, however. Similarly, males at all three grades tended to write fewer words than females and at grades 8 and 11, fewer sentences, as well. The gender differences at grade 11 in these measures were reduced across time.

[7] The sample size is insufficient to permit reliable estimates for Hispanic, Asian-American, or other subgroups defined by race or ethnicity.

TABLE 5.4

Trends in Punctuation Errors for the Nation

THE NATION'S REPORT CARD

	Year	Mean	Percentiles 25th	50th	75th	90th
Total punctuation errors per 100 words						
Grade 4	1988	3.1 (0.4)	0.1	1.2	4.3	7.8
	1984	2.7 (0.2)	0.1	0.5	4.4	7.4
Grade 8	1988	1.8 (0.2)	0.1	0.9	2.8	5.0
	1984	1.9 (0.1)	0.1	1.2	2.7	4.5
Grade 11	1988	1.9 (0.3)	0.3	1.2	2.4	4.1
	1984	1.7 (0.1)	0.2	1.1	2.4	4.4
Punctuation omitted per 100 words						
Grade 4	1988	2.9 (0.4)	0.1	0.5	4.0	7.4
	1984	2.4 (0.2)	0.1	0.4	4.0	7.2
Grade 8	1988	1.5 (0.2)	0.1	0.5	2.2	4.2
	1984	1.4 (0.1)	0.1	0.6	2.1	4.1
Grade 11	1988	1.5 (0.3)	0.1	0.7	1.9	3.3
	1984	1.4 (0.1)	0.1	0.7	1.9	3.8
Wrong punctuation per 100 words						
Grade 4	1988	0.2 (0.1)	0.1	0.1	0.3	0.5
	1984	0.3 (0.1)	0.1	0.1	0.3	0.5
Grade 8	1988	0.4 (0.1)	0.1	0.1	0.4	1.5
	1984	0.4 (0.1)	0.1	0.1	0.5	1.8
Grade 11	1988	0.4 (0.1)	0.1	0.2	0.6	1.6
	1984	0.4 (0.0)	0.1	0.1	0.4	1.4

Note: No statistically significant difference between years at the .05 level. Jackknifed standard errors are presented in parentheses. Data for grade 4 are based on a different writing task than data for grades 8 and 11.

Sentence Structure. There were no significant gains or declines across time in the frequency of run-on sentences or fragments in the papers written by any of the subpopulations examined. However, in each year, there were significant differences between various subgroups in the frequency of these errors. While in 1984 the papers of Black

eleventh graders included significantly more fragments than those of their White peers, the difference was diminished by 1988. In that assessment, though, the papers written by Black students contained a significantly higher percentage of run-on sentences than the papers of White students. There were no significant differences between males and females in the frequency of sentence errors in either year.

Word-Level Errors. Improvements in capitalization and word choice were small for all subgroups, necessarily so because of the low rate of these errors to begin with. The most significant change across time was an improvement in capitalization in the papers written by Black eighth graders.

Punctuation Errors. While Black eleventh graders showed significant improvement in punctuation skills between 1984 and 1988, there were no significant changes across time for White students at any of the three grades. The only significant change in punctuation errors for males and females was a rise in the rate of punctuation omissions among fourth-grade girls. At this grade, female and White students tended to make fewer punctuation errors than their male or Black peers, but these differences were diminished by grade 8.

Summary

In 1984 and 1988, it is clear that most students were able to control the conventions of written English. If many fourth graders still have difficulties with spelling and with some aspects of grammar and usage, most of these problems disappear by grade 11. Even the best papers written for the assessment contained some errors, and these are to be expected in first-draft writing.

Generally, the errors that were most frequent for a particular group of students or at a particular grade level were found in the papers written by only a small proportion of those students. Thus, while focused instruction in the conventions of written language may be necessary for certain individuals or subpopulations of students, additional whole-class drill and practice is not likely to be useful to the majority of students.

Detailed analyses of the performance of fourth, eighth, and eleventh graders suggest there have been few changes in their mastery of conventions between 1984 and 1988. Overall, the papers in 1988 seemed to be slightly longer, but error rates remained relatively constant. The most consistent trends in performance occurred for Black students, who improved slightly on many of these measures, even when the performance of their White peers remained constant or fell slightly.

CHAPTER SIX

Trends in Attitudes, Writing Behaviors, and Instruction

IN ADDITION TO PROVIDING responses to various writing tasks, students participating in the 1984 and 1988 writing assessments were asked to complete a series of questions related to their attitudes toward writing, their ability to manage the writing process, and their instructional environment. This chapter will summarize trends in their responses to these questions.

Learning to Value Writing

One set of questions asked students about the value they placed on writing, their attitudes toward their writing, and the ways in which they used writing in their lives.

Value Placed on Writing. Questions dealing with the value placed on writing asked students to what extent they agreed with statements such as "Writing helps me think more clearly," "Writing helps tell others what I think," and "People who write well have a better chance of getting good jobs." Their responses are presented in TABLE 6.1.

For eleventh graders, there were no significant increases from 1984 to 1988 in the percentage who reported that they valued writing in the ways mentioned. However, there were significant increases in the percentages of fourth- and eighth-grade students who acknowledged that they valued writing in certain ways. Students in these grades were

TABLE 6.1

Trends in the Value Placed on Writing

THE NATION'S REPORT CARD

Statements About Writing	Year	Percentage of Students Reporting the Statements as True More than Half the Time		
		Grade 4	Grade 8	Grade 11
Writing helps me to think more clearly.	1988	—	44.0	46.8
	1984	—	44.5	52.4
Writing helps me tell others what I think.	1988	—	53.3	57.2
	1984	—	52.1	55.3
Writing helps me tell others how I feel.	1988	—	54.1	58.2
	1984	—	50.1	55.4
Writing helps me understand my own feelings.	1988	—	44.7	48.5
	1984	—	40.2	47.3
Writing can help me get a good job.	1988	44.6*	52.3*	52.3
	1984	33.6	40.2	52.9
Writing helps me share my ideas.	1988	60.9	59.1	63.3
	1984	52.9	52.2	61.6
Writing helps me to show people that I know something.	1988	66.9	64.7*	64.2
	1984	62.5	54.8	58.3
People who write well have a better chance of getting good jobs.	1988	—	50.2	55.6
	1984	—	47.0	54.4
People who write well are more influential.	1988	—	54.5*	58.3
	1984	—	49.2	54.2

*Shows statistically significant difference between years at the .05 level.

significantly more likely in 1988 than in 1984 to agree that writing would help them get a good job, and eighth graders were also more likely to agree with the statements "Writing helps me to show people that I know something" and "People who write well are more influential."

In 1984 and 1988, the responses suggest that writing is valued by only about half the students at each grade level assessed, and that their views do not change dramatically as they progress through school.

To explore the relationship between the value students place on writing and their writing proficiency, responses to the questions above were used to create a composite variable reflecting the value placed on writing overall.[8] TABLE 6.2 presents the percentages of students reporting a low, medium, and high value for writing, and the average writing proficiency of each group.

There were significant changes across time in eighth graders' responses to specific questions on the value of writing, and as a result, their responses to the combined set of items reveal a significant rise in the percentage of students who placed a high value on writing. Conversely, there were no significant increases in the percentage of eleventh graders responding positively to individual questions on the value of writing, and the value they placed on writing overall did not change. At grade 11, students whose responses indicated that they valued writing the most tended to have the highest proficiency. Cause and effect relationships cannot be drawn from the data, however, making it impossible to say whether better writers develop a higher appreciation for the value of writing, or whether those who value writing highly become better writers. At grade 8, students' proficiency did not appear to vary according to the value placed on writing.

TABLE 6.2

Trends in the Overall Value Placed on Writing: Composite Results and Average Writing Proficiency

THE NATION'S REPORT CARD

		Low		Medium		High	
	Year	Percent	Average Proficiency	Percent	Average Proficiency	Percent	Average Proficiency
Grade 8	1988	49.4	206.8	35.1	208.7	15.5*	208.2
	1984	51.0	207.8	37.7	217.1	11.3	206.2
Grade 11	1988	44.2	218.0	37.9	222.6	17.9	226.8
	1984	44.0	216.5	40.2	222.4	15.7	227.9

*Shows statistically significant difference between years at the .05 level.

[8] A list of the items included in this and other composite variables, and a discussion of the procedures used to create them, is provided in the Procedural Appendix.

Attitudes Toward Writing. Students' responses to questions about their attitudes toward writing are summarized in TABLE 6.3. Items in this set asked students to react to statements such as "I like to write" and "I write on my own outside of school."

In 1984 and 1988, students' views on writing were relatively negative, and increasingly so in the upper grades. Thus, while 55 percent of the fourth-grade students claimed that they liked to write in 1988, only 42 percent of the eighth graders and 37 percent of the eleventh graders agreed with this statement. An interesting exception to this pattern is evident in students' responses to the statement on writing outside of school, where students in the upper grades were less likely to agree that they would not write anything if they were not required to for school. However, students in the upper grades were less likely to report that they actually wrote on their own outside of school. The only significant change across time in students' responses to these attitudinal questions was a decrease in the percentage of fourth-grade students who agreed that they wouldn't write anything if they didn't have to write for school.

TABLE 6.3 Trends in Attitudes Toward Writing

THE NATION'S REPORT CARD

		Percentage of Students Reporting the Statements as True More Than Half the Time		
	Year	Grade 4	Grade 8	Grade 11
I like to write.	1988	54.6	41.9	36.6
	1984	55.8	38.9	40.3
I am a good writer.	1988	59.7	43.7	40.5
	1984	60.0	41.5	38.6
People like what I write.	1988	53.2	38.0	37.0
	1984	53.4	38.1	35.7
I write on my own outside of school.	1988	44.1	36.5	26.4
	1984	47.7	36.4	31.0
I don't like to write things that will be graded.	1988	35.1	33.1	31.1
	1984	37.9	31.4	26.7
If I didn't have to write for school, I wouldn't write anything.	1988	26.7*	18.6	15.6
	1984	33.4	17.2	14.9

*Shows statistically significant difference between years at the .05 level.

TABLE 6.4

Trends in General Attitudes Toward Writing: Composite Results and Average Writing Proficiency

THE NATION'S REPORT CARD

		Low		Medium		High	
	Year	Percent	Average Proficiency	Percent	Average Proficiency	Percent	Average Proficiency
Grade 4	1988	19.0	171.2	42.5	173.7	38.5	175.4
	1984	19.3	169.0	39.8	175.1	40.8	167.5
Grade 8	1988	29.0	203.3	46.0	211.5	25.0	208.1
	1984	27.6	206.0	48.2	216.0	24.2	216.7
Grade 11	1988	32.8	215.9	46.9	221.6	20.3	226.4
	1984	33.1	216.1	46.2	227.6	20.7	227.2

Note: No statistically significant difference between years at the .05 level.

As shown in TABLE 6.4, responses to the combined set of items reveal no significant changes across time in students' general attitudes toward writing.

As with students' responses to the individual attitudinal items, these data indicate that students' views on writing become increasingly negative as they proceed through the school years. While 39 percent of the fourth graders in 1988 registered highly positive attitudes toward writing, only half as many eleventh graders did so.

At the two younger grades, there was little variation in students' writing proficiency relative to their attitudes toward writing. By grade 11, students with the most positive attitudes toward writing were also likely to be the best writers, although again cause and effect relationships cannot be determined from the data.

Uses of Writing. One set of items asked students about the uses of writing in their own lives, including such personal uses as keeping a diary or journal, as well as such functional uses as making lists of things to do or buy. Students' responses to these questions are presented in TABLE 6.5.

Students in the upper grades were less likely to report that they actually wrote on their own outside of school.

To a certain extent, trends in responses to these items mirrored the changes observed in values and attitudes. At grade 4, students' attitudes toward writing and their reported uses of writing remained fairly constant across the two assessments. Eighth-grade students appeared to see slightly more value in writing in 1988 than their counterparts had in 1984, and there were also increases in their reported uses of writing — most notably, a significant rise in their writing of stories or poems. Eleventh graders' reported uses of writing and the overall value they placed on writing increased from 1984 to 1988, although their attitudes toward writing remained fairly constant.

TABLE 6.5

Trends in Personal and Social Uses of Writing

THE NATION'S REPORT CARD

		Percentage of Students Reporting Kinds of Writing at Least Once a Week		
	Year	Grade 4	Grade 8	Grade 11
Keep a diary or journal	1988	—	28.6	22.2
	1984	—	25.9	19.0
Write letters to friends or relatives	1988	32.3	41.9	43.9*
	1984	32.5	37.3	36.2
Write notes and messages	1988	44.7	70.8	81.5*
	1984	43.7	67.9	73.7
Write stories or poems that are not schoolwork	1988	24.2	15.3*	15.3*
	1984	25.9	10.2	11.7
Make lists of things to buy or do	1988	—	42.4	45.8
	1984	—	43.8	45.5
Fill out order blanks to buy things	1988	—	21.2	14.6
	1984	—	16.8	16.1
Write for the school newspaper, magazine, or yearbook	1988	—	8.1	4.8
	1984	—	8.0	5.3

*Shows statistically significant difference between years at the .05 level.

Eighth- and eleventh-grade students' responses on the frequency with which they wrote letters, notes, and stories were used to create a composite variable that reflects the personal and social uses of writing overall. The results are presented in TABLE 6.6.

In 1988, eleventh-grade students were more likely than eighth-grade students to engage in a high amount of personal writing and, in fact, the percentage of eleventh graders in the high category increased significantly from 1984 to 1988. In both grades, students who reported medium or high use of writing tended to have higher average writing proficiency than students whose use of writing was low.

TABLE 6.6

Trends in Personal and Social Uses of Writing: Composite Results and Average Writing Proficiency

THE NATION'S REPORT CARD

		Low		Medium		High	
	Year	Percent	Average Proficiency	Percent	Average Proficiency	Percent	Average Proficiency
Grade 8	1988	16.7	196.9	43.0	210.6	40.4	212.5
	1984	19.5	202.4	44.9	215.4	35.7	216.2
Grade 11	1988	9.8*	202.9	44.0	222.2	46.2*	222.6
	1984	16.0	213.2	49.1	227.1	34.9	225.7

*Shows statistically significant difference between years at the .05 level.

Managing the Writing Process

In addition to building positive attitudes toward writing, teachers have sought to help students develop effective strategies for managing the writing process, including strategies for planning and revising what they write. Previous studies and earlier national assessments of writing have shown that students who make use of a variety of strategies are more likely to be effective writers.

Planning Strategies. Several items asked fourth-grade students about their planning activities, and their responses are summarized in TABLE 6.7. It appears that the percentage of students who gave overt attention to planning decreased across time, although the change was statistically significant for only one item: The percentage of students reporting that they usually ask themselves about the subject before beginning to write dropped from 49 to 38 percent.

One writing task given as part of both assessments provided an opportunity to observe explicit planning strategies. The Recreation Opportunities task was formatted so that the remainder of the page on which the writing prompt was printed was left blank and the students were told that this space was available to make notes before writing. The following pages were to be used for stu-

TABLE 6.7

Trends in the Use of Planning Strategies

THE NATION'S REPORT CARD

	Percentage of Fourth-grade Students Reporting Use of Strategy More Than Half the Time	
	Year	Percent
Think about what you want to say before writing	1988	69.4
	1984	74.8
Ask yourself what kinds of things people would like to know about the subject of the paper	1988	38.0*
	1984	48.5
Look up facts in books, magazines, or newspapers	1988	40.9
	1984	41.2
Write in different ways for different audiences	1988	38.7
	1984	40.9

*Shows statistically significant difference between years at the .05 level.

dents' actual responses. In addition to rating the quality of the responses, raters tabulated whether the students had used the space provided to make notes.

TABLE 6.8 summarizes the evidence of overt planning for the eighth and eleventh graders who were given this writing task. In both grades, the overall proportion of students engaging in overt planning was small and did not change across time. It is interesting to note, however, that in both years eleventh graders were somewhat more likely than eighth graders to engage in overt planning.

TABLE 6.8

Trends in Overt Planning on "Recreation Opportunities" Task

THE NATION'S REPORT CARD

	Percentage Using Space Provided for Planning	
Year	Grade 8	Grade 11
1988	12.8	18.6
1984	15.8	17.5

Note: No statistically significant difference between years at the .05 level.

TABLE 6.9

Trends in Frequency of Revising and Editing

THE NATION'S REPORT CARD

	Year	Grade 4
	Percentage of Students Reporting Use of Strategy on Last Writing Done for School	
Recopied paper before handing it in	1988	46.8
	1984	47.1
Made changes in paper before handing it in	1988	70.1
	1984	64.7
	Percentage of Students Reporting Use of Strategy More Than Half the Time	
Make changes as you write	1988	60.8
	1984	62.7
Make changes after you have written the paper once	1988	47.7
	1984	51.5
Think about where different facts and ideas go in the paper	1988	57.7
	1984	60.5

Note: No statistically significant difference between years at the .05 level.

Revising and Editing Strategies. A variety of questions asked students about the revising and editing strategies they used, including their attention to writing conventions (spelling, punctuation, grammar) as well as to the structure and organization of the text as a whole. Their responses are summarized in TABLES 6.9 and 6.10.

Fourth-grade students were more likely in 1988 than in 1984 to report making changes in their last paper; however, they were less likely to report moving sentences or paragraphs when revising. In contrast, eighth graders in 1988 reported slightly less attention to revisions in spelling and punctuation than in 1984, and moved sentences and paragraphs more often. While students in grade 11 reported less of various kinds of revising in 1988, none of the changes was significant.

In 1988 and 1984, the kinds of revisions reported were closely connected to the level of effort involved. Thus, the most frequently reported strategies involved the smallest units of text — such as changes in spelling, punctuation, or grammar — and the least frequently reported strategies were those that require extensive effort — such as moving sentences or paragraphs, starting over, or rewriting most of a paper.

TABLE 6.10 Trends in the Use of Specific Revising and Editing Strategies

THE NATION'S REPORT CARD

	Year	Percentage of Students Reporting Use More Than Half the Time		
		Grade 4	Grade 8	Grade 11
Correct spelling	1988	72.5	71.2	73.7
	1984	75.2	75.1	76.2
Correct punctuation	1988	65.2	65.7	66.9
	1984	64.5	68.6	70.3
Correct grammar	1988	53.7	63.5	68.4
	1984	51.3	64.7	70.2
Change words	1988	62.9	69.5	70.6
	1984	61.9	64.6	71.4
Add ideas or information	1988	63.2	64.6	64.8
	1984	61.1	59.7	69.7
Take out parts you don't like	1988	45.4	56.3	62.6
	1984	44.5	56.2	58.4
Move sentences or paragraphs	1988	39.1*	36.0*	42.7
	1984	44.3	30.4	46.1
Rewrite most of the paper	1988	35.6	42.7	39.0
	1984	36.0	39.6	43.6

*Shows statistically significant difference between years at the .05 level.

It appears that the percentage of students who gave overt attention to planning decreased across time. . .

TABLE 6.11 summarizes the data on students' overall use of revising strategies.

It appears that the amount of revising increases across the school years, as eleventh-grade students were less likely than the younger students to report a low amount of revising and more likely to report a high amount of revising. At grades 8 and 11, students who revised the most tended to be the best writers, or — viewed alternatively — the best writers tended to do the most revising.

TABLE 6.11 Trends in Revising Strategies: Composite Results and Average Writing Proficiency

THE NATION'S REPORT CARD

		Low		Medium		High	
	Year	Percent	Average Proficiency	Percent	Average Proficiency	Percent	Average Proficiency
Grade 4	1988	19.1	172.7	35.5	175.0	45.4	174.1
	1984	16.7	168.5	39.7	168.7	43.6	173.3
Grade 8	1988	13.0	195.5	33.0	206.1	54.0	212.6
	1984	14.3	201.8	31.9	212.3	53.9	217.2
Grade 11	1988	11.2	211.6	31.2	217.1	57.6	224.4
	1984	11.4	205.5	29.1	217.8	59.5	230.1

Note: No statistically significant difference between years at the .05 level.

The Instructional Context

A few of the items included in the 1984 and 1988 assessments focused on the kinds and amount of writing that students did in school and on the kinds of responses that students received from their teachers. Trends in responses to these items provide a glimpse of the instruction students were receiving.

Writing in English Class. TABLE 6.12 summarizes students' responses to a question about the kinds of writing they had done for English class the previous week.

At all three grade levels, students were significantly more likely in 1988 than in 1984 to report that they recently wrote an essay, composition, or theme. This trend was joined by less consistent increases in other forms of informative and persuasive writing; book reports and stories were more common among fourth graders, and stories were more common among eighth-graders in 1988 than in 1984.

Teachers' Comments on Completed Papers. Students in grades 8 and 11 were asked about the extent to which teachers commented on completed papers. Their responses are summarized in TABLE 6.13.

TABLE 6.12

Trends in Personal and Social Uses of Writing

THE NATION'S REPORT CARD

		Percentage of Students Reporting at Least One Paper Written for English Class Last Week		
	Year	Grade 4	Grade 8	Grade 11
Essay, composition, or theme	1988	25.1*	48.4*	63.6*
	1984	19.3	40.9	59.6
Book report	1988	40.5*	34.8	30.7
	1984	36.1	35.4	30.4
Other report	1988	32.0	29.4	38.4
	1984	28.3	26.5	37.7
Letter	1988	38.7	25.3	19.6
	1984	38.5	20.8	15.9
Story	1988	43.3*	48.9*	39.7
	1984	37.2	41.6	39.7
Poem	1988	29.7	14.7	20.9
	1984	25.7	14.7	18.3
Play	1988	15.2	12.2	11.3
	1984	13.9	10.4	12.6

*Shows statistically significant difference between years at the .05 level.

An increase in the amount of writing done by students is consistent with recent recommendations for writing instruction, and would seem a necessary first step toward improving students' writing skills.

TABLE 6.13 Trends in Teachers' Comments on Completed Papers

THE NATION'S REPORT CARD

		Percentage of Students Reporting That Teachers Comment on Aspect More than Half the Time	
	Year	Grade 8	Grade 11
Follow directions	1988	41.4	27.9
	1984	41.5	30.3
Wrote enough	1988	35.6	25.9
	1984	33.0	26.3
Ideas in paper	1988	43.7	42.8
	1984	40.5	39.5
Way ideas explained	1988	40.7	41.9
	1984	37.0	39.8
Way feelings expressed	1988	37.9	36.7
	1984	32.5	30.8
Organization	1988	44.3	38.5
	1984	42.7	40.1
Words	1988	39.9	29.9
	1984	37.7	31.5
Spelling, punctuation, grammar	1988	53.4	43.1
	1984	51.1	44.8
Neatness and handwriting	1988	45.1	27.2
	1984	48.4	31.1

Note: No statistically significant difference between years at the .05 level.

At grades 8 and 11, students' reports indicated little change in the extent or nature of teacher comments between 1984 and 1988. Eighth graders in 1988 were most likely to report that their teachers commented more than half the time on grammar, punctuation, and spelling, while other kinds of comments were reported slightly less often. Eleventh graders were less likely than eighth graders to report that their teachers commented on many of the aspects listed.

TABLE 6.14 summarizes student responses to a related series of questions, asking about the types of feedback (oral or written) that they received from teachers on their writing.

TABLE 6.14

Trends in Teachers' Feedback on Writing

THE NATION'S REPORT CARD

		Percentage of Students Reporting Teachers Provide Type of Feedback Almost Every Time They Write		
	Year	Grade 4	Grade 8	Grade 11
Mark mistakes	1988	39.6*	50.5*	61.3
	1984	48.9	60.0	63.2
Write notes	1988	12.2*	23.6	43.0
	1984	18.0	21.4	43.4
Point out what is well done	1988	28.4	24.9	31.0
	1984	33.3	21.2	31.7
Point out what is not well done	1988	26.6*	32.7	43.3
	1984	31.8	34.3	44.8
Make suggestions for next time	1988	29.6	27.0	33.0
	1984	32.3	27.8	33.9
Show an interest in what you write	1988	35.5	31.1	32.2
	1984	38.0	28.5	32.4

*Shows statistically significant difference between years at the .05 level.

At grade 4, students were less likely in 1988 than in 1984 to report that their teachers marked mistakes, wrote notes, or pointed out what was not done well in their papers. At grades 8 and 11, there was little change in the types of teacher feedback reported by students, although eighth graders in the most recent assessment were significantly less likely to state that their teachers marked mistakes in their papers almost every time they wrote.

When students' responses are aggregated, the results indicate that the amount of teacher feedback increases across the grades. The percentages of students in each grade who reported low, medium, and high amounts of feedback — and the average writing proficiency for each of these groups — are presented in TABLE 6.15.

From 1984 to 1988, there was a significant increase at grade 4 in the percentage of students who reported receiving a low amount of feedback; this was paired with a significant decrease in the percentage of students receiving a medium amount of feedback. There was little change across time at grades 8 and 11 in the distribution of students across the categories.

TABLE 6.15

Trends in Teachers' Feedback on Writing: Composite Results and Average Writing Proficiency

THE NATION'S REPORT CARD

	Year	Low		Medium		High	
		Percent	Average Proficiency	Percent	Average Proficiency	Percent	Average Proficiency
Grade 4	1988	64.2*	173.8	28.7*	171.5	7.2	175.1
	1984	51.6	169.4	40.0	166.4	8.4	173.7
Grade 8	1988	50.9	205.5	34.0	209.5	15.0	212.2
	1984	52.2	207.3	33.1	213.9	14.7	213.4
Grade 11	1988	39.6	215.5	33.0	218.8	27.3	224.3
	1984	39.4	217.6	33.8	225.2	26.8	224.8

*Shows statistically significant difference between years at the .05 level.

Summary

Overall, students' reports on the value placed on writing, on how they managed the writing process, and on the instruction they received reflect no major changes between 1984 and 1988. There are a few minor shifts, however.

One such shift was in the amount of writing that students reported doing. At all three grades, the amount of essay writing increased from 1984 to 1988, and at grades 4 and 8, there were some increases in other forms of informative and persuasive writing, as well. An increase in the amount of writing done by students is consistent with recent recommendations for writing instruction, and would seem a necessary first step toward improving students' writing skills.

The additional writing that students reported doing in 1988 was accompanied by different emphases and attitudes at different grades. Fourth-grade students reported slightly more positive attitudes in 1988 than in 1984. At grade 8, students were somewhat more likely in 1988 than in 1984 to acknowledge the value of writing and to use certain revising and editing strategies. Eleventh graders were more likely in 1988 than in 1984 to report personal and social uses of writing, but their use of various planning, revising, and editing strategies remained constant.

At the same time that students were reporting more writing, those at grade 4 also reported somewhat less feedback from their teachers about the writing that they did. Although the changes observed were relatively small, a pattern in which students wrote more but received

less extensive comment on each piece of writing would also be consistent with recent suggestions for students to "write more," without the need for teachers to mark each paper extensively.

Particularly in the upper grades, the best writers tended to be students who valued writing, had positive attitudes toward their writing, used writing extensively for personal and social reasons, revised and edited their work using a variety of strategies, and received feedback on their writing from their teachers. Again, however, it should be noted that cause and effect relationships cannot be determined. Thus, two interpretations are possible: that better writers seek out these opportunities, and that the opportunities themselves strengthen students' writing proficiency.

Overall, however, nearly a decade into the educational reform movement and the writing process movement — each of which has advocated changes in both the kinds of writing instruction provided and in the uses for writing in schools — NAEP data indicate that both students' writing instruction and their writing performance have remained relatively unchanged.

PROCEDURAL APPENDIX

General Background on The Nation's Report Card

THE NATION'S REPORT CARD, the National Assessment of Educational Progress (NAEP) is an ongoing, congressionally mandated project established in 1969 to conduct national surveys of the educational attainments of young Americans. Its primary goal is to document the status of and trends in educational achievement, based on comprehensive and dependable national educational achievement data collected in a scientific manner. Today, it remains the only regularly conducted national survey of educational achievement at the elementary-, middle-, and high-school levels.

Since 1969, The Nation's Report Card has assessed 9-, 13-, and 17-year-olds in a variety of school subjects. In the 1984 assessment, the project began sampling students by grade as well as by age to enhance the utility of the data to school administrators and teachers. The 1988 effort included in-school assessments of writing, reading, U.S. history, civics, and geography. In other years, the subjects assessed have included mathematics, science, art, literature, music, and career development. In addition to the student assessments, NAEP also periodically surveys young adults; in 1985, the project completed a young adult literacy assessment.

NAEP's student assessments were conducted annually through 1980 and have been carried out biennially since then. Most subjects have been reassessed to monitor trends in achievement over time. To date, NAEP has assessed approximately 1,300,000 young Americans.

From its inception, NAEP has developed assessments through a consensus process. Educators, scholars, and citizens representative of many diverse constituencies and points of view design objectives for each subject area assessment, proposing general goals they feel students should achieve in the course of their education. After careful reviews, the objectives are given to item writers, who develop assessment questions appropriate to the objectives.

All items undergo extensive reviews by subject-matter experts, measurement specialists, and editors to eliminate any potential bias or lack of sensitivity to particular groups. The items are then administered to a stratified, multistage probability sample of students chosen so that their assessment results may be generalized to the entire national population. Once the data have been collected, scored, and analyzed, NAEP publishes and disseminates the results, providing information that is designed to help educators, legislators, and others improve education in the United States. With certain restrictions designed to protect their security, items used in the assessments are made available to states, localities, and researchers upon request. The assessment data also are available to researchers who wish to conduct secondary analyses.

In addition to gathering cognitive data, NAEP has asked students, teachers, and school officials to answer a variety of questions about instruction, activities, experiences, curriculum, resources, attitudes, and demographics. This background information is designed to improve the usefulness of NAEP achievement results and to provide an opportunity to examine policy issues.

The Nation's Report Card is supported by the U.S. Department of Education, Office of Educational Research and Improvement, and directed by the National Center for Education Statistics. Educational Testing Service has been the grantee for the project since 1983. Earlier assessments were conducted by the Education Commission of the States. NAEP is governed by an independent, legislatively-defined board, the National Assessment Governing Board.

General Background on the 1984 and 1988 NAEP Writing Assessments

The Nation's Report Card has carried out five national assessments of writing, in the 1969-70, 1973-74, 1978-79, 1983-84, and 1987-88 school years. Each assessment has included a variety of open-ended writing tasks and background questions, some of which have been readministered in successive assessments to permit an analysis of trends in writing performance and related factors over time.[9] However, due to the considerable resources required for direct writing assessment and to shifts in the goals of writing instruction over this 20-year period, the sets of tasks have evolved from assessment to assessment, with some tasks being retired and new ones developed to take their place.

This report is based on the 1983-84 and 1987-88 writing assessments of students in grades 4, 8, and 11 attending public and private schools. In both years, the same tasks were included verbatim and were administered in the same manner to comparable samples of students. Eighth graders were assessed in the fall (October-December), fourth graders in the winter (January-February), and eleventh graders in the spring (March-May). The two assessments will subsequently be referred to by the last half of the school year in which they were conducted — thus, as the 1984 and 1988 assessments.

The writing tasks and background questions administered in 1984 and 1988 were designed to measure aspects of writing performance and related factors that were designated as important by a nationally representative panel of writing specialists, educators, and concerned citizens. The primary objective of the assessments was to measure students' ability to write for various purposes;

[9] See Arthur N. Applebee, Judith A. Langer, and Ina V.S. Mullis, *Writing Trends Across the Decade: 1974-84* (Princeton, NJ: Educational Testing Service, National Assessment of Educational Progress, 1986).

related objectives were to evaluate the extent to which students managed the writing process, controlled the forms of written language, and valued writing. The primary objective — the use of writing to accomplish a variety of purposes — is discussed below.

Writing occurs regularly in people's personal and social lives as well as in school settings. People write to accomplish many different purposes, such as straightening out a billing error by letter, explaining a personal viewpoint on an issue in a speech, or expressing an artistic impulse in a story or poem. The ability to explain ideas or document events in writing can also help in a variety of job situations. Letters, reports, inventories, and a wide range of recordkeeping systems are integral to many businesses. Consequently, students need opportunities to develop a wide range of writing skills by writing for many purposes in varying contexts or situations.

In the sections that follow, three purposes for writing are discussed: informative, persuasive, and personal/imaginative narrative. These purposes often blend into each other in various ways, depending upon the contexts for writing. For example, an autobiography might very well be considered narrative, informative, and persuasive; a job application and resume may persuade as well as inform. Although these three purposes may frequently coexist in a piece of writing, one or another type often predominates. Writers' purposes are shaped by their initial perceptions of their topic, by the ways they consider their audience, by the social or instructional contexts in which they are writing, and by changes in focus that occur as they develop their topics.

Informative Writing

Informative writing is used to share knowledge and convey messages, instructions, and ideas. Like all writing, informative writing is filtered through the writer's impressions, understanding, and feelings. Used as a means of exploration, informative writing helps the writer assimilate new ideas and reexamine old conclusions. When addressed to more public audiences, informative writing involves reporting on events or experiences, or analyzing concepts and relationships, including developing new hypotheses and generalizations. Any of these types of informative writing can be based on the writer's personal knowledge and experience or on less familiar information that must be understood in order to complete the task. Usually, informative writing involves a mix of the familiar and the new, clarifying both in the process of writing about them. Depending on the nature of the task, however, writing based on both personal experience and secondary information can span the range of thinking skills from recall to analysis and evaluation.

Persuasive Writing

The primary aim of persuasive writing is to influence others to bring about some action or change. It may contain great amounts of information — facts, details, examples, comparisons, statistics, or anecdotes — and, as the writer identifies the

most persuasive reasons to support a point of view, it may involve significant discoveries about one's own feelings and ideas. Writing persuasively also requires the writer to employ such critical thinking skills as analysis, synthesis, and evaluation.

Persuasive writing may be called for in a variety of situations. It may involve responding to requests for advice by giving an opinion and supporting it with reasons. It may also involve arguing one's own point of view in such a way that a particular audience will find it convincing. When there is opposition to what the writer is advocating, persuasive writing may entail refuting arguments that are contrary to one's own point of view.

In all persuasive writing, authors must choose the stance they will take. They can, for instance, use emotional or logical appeals or an accommodating or demanding tone. Regardless of the situation or approach, writers must be concerned first with having a desired effect on readers, beyond merely adding to their knowledge of a particular topic.

Personal/Imaginative Narrative Writing

Personal/imaginative narrative writing contributes to an awareness of our world as we create, manipulate, and interpret reality. Such writing, whether fact or fantasy, requires close observation of people, objects, and places, while it enables exploration of all the wide-ranging possibilities of human experience. Further, this type of writing fosters creativity and speculation by allowing us to express our thoughts and then stand back, as a more detached observer might, and grasp more fully what we feel and why. Thus, personal/imaginative narrative offers a special opportunity to analyze and understand emotions and actions.

Whether a means of discovery or just plain "fun," narrative writing can produce stories or personal essays and can lead to other forms, such as poems or plays. Practice with these forms helps writers to develop an ear for language and to improve literary abilities.

Informative and persuasive writing can benefit from the features used in narrative writing. Informative writing, for example, can narrate an incident as part of a report or clarify a point through the use of metaphor or simile. A persuasive statement can be convincing not only on the basis of its internal logic, but also on the strength of its illustrative material (its stories), its rhythm, and the voice of its persona.

The 12 writing tasks included in the assessment were therefore designed to reflect a range of the informative, persuasive, and imaginative purposes for writing. Each student responded to one to four writing tasks, yielding 600 to 1200 responses per task. In

addition to generating samples of their writing in response to these tasks, students at each grade level were asked a series of background questions about their demographics and their writing practices, instruction, and attitudes.

Sampling, Data Collection, and Scoring

Sampling and data collection activities for the 1988 NAEP assessment were conducted by Westat, Inc. As with all NAEP assessments, the writing trend assessments were based on a deeply stratified, three-stage sampling design.[10] The first stage of sampling entails defining primary sampling units (PSUs), which are typically groups of contiguous counties, but sometimes a single county; classifying the PSUs into strata defined by region and community type; and randomly selecting PSUs. The second stage entails enumerating, stratifying, and randomly selecting public and private schools at each grade-level within each PSU selected at the first stage. The third stage of the sampling design involves randomly selecting students within a school for participation in NAEP. Some students sampled (less than 4 percent) were excluded from each assessment because of limited English proficiency or a severe disability. In 1984, NAEP began collecting descriptive information about excluded students.

At each grade level, two samples of students — subsequently referred to as the "bridge" and "main" samples — were assessed in writing in 1988. The 1988 bridge sample assessment was conducted so that the results could be linked to the results from the 1984 main writing assessment; these trend data are reported herein. Accordingly, students in the bridge samples were chosen by the same age/grade definitions (age 9 or grade 4, age 13 or grade 8, and age 17 or grade 11), administered a subset of the same materials, and assessed at the same times of year as in 1984 (age 9/grade 4 in the winter, age 13/grade 8 in the fall, and age 17/grade 11 in the spring). Each student was given an assessment booklet that contained a combination of writing and reading materials.

Students sampled for participation in the main 1988 writing assessment were also selected by age/grade; unlike the bridge samples, however, the oldest students were either age 17 or in grade 12. Students were administered new writing items assembled in a manner that was different than for the bridge assessment. Specifically, each student received a booklet containing writing materials only. Half the students at each age/grade level were assessed in the fall of 1987 and the remaining half were assessed in the spring of 1988. The results from the 1988 main writing assessment will be published in 1990 in a second writing report.

The school sample sizes and the school cooperation and response rates for the 1984 and 1988 trend assessments are provided in TABLES A.1 and A.2.

Students participating in the NAEP writing trend assessments were assembled for a session that lasted approximately one hour. Each student received a booklet containing a set of general background questions and three 15-minute blocks of cognitive items, including from one to four writing items and some number of reading items. The assessments were administered using a well-trained professional data collection staff and subjected to rigorous quality control evaluations conducted through site visits by NAEP and Westat staff.

[10] Detailed information can be found in the *Report on Sample Selection, Weighting, and Variance Estimation, Year 13* and the *Report on Sample Selection, Weighting, and Variance Estimation, Year 19*, prepared by Westat, Inc.

TABLE A.1 School Sample Sizes

THE NATION'S REPORT CARD

Age/Grade	1984	1988
9/4	683	154
13/8	549	173
17/11	345	114
Total	1,577	441

TABLE A.2 School Cooperation and Student Response Rates

THE NATION'S REPORT CARD

Age/Grade	Percent Schools Participating	Percent Student Completion
1984		
9/4	88.6	92.5
13/8	90.3	90.3
17/11	83.9	82.2
1988		
9/4	87.2	92.3
13/8	92.7	88.2
17/11	78.1	77.4

Note: The 1984 and 1988 data in these tables were obtained from the corresponding **Reports on NAEP Field Operation and Data Collection Activities,** prepared by Westat, Inc. The decreased school sample sizes in 1988 reflect NAEP's new procedure of using special bridge samples to measure trends, in which previous assessment methods are replicated with meticulous care. Although more schools and students participated in the full 1988 assessment of reading, writing, U.S. history, civics, and geography, the figures above are for the writing bridge samples upon which this report is based. Although sampled schools that refused to participate were replaced, school cooperation rates are computed based on the schools originally selected for participation in the assessments. The student completion rates represent the percentage of students assessed of those invited to be assessed, including in follow-up sessions when necessary.

Since 1984, The Nation's Report Card has used a powerful variant of matrix sampling called Balanced Incomplete Block (BIB) spiralling to govern the way in which most of the assessment materials are assembled and distributed. The "balanced incomplete block" part of the design assigns blocks of items to booklets in such a way that each block appears in the same number of booklets and each pair of blocks appears together in at least one booklet. The "spiralling" part of the method cycles the booklets for administration so that typically only a few students in any one assessment session receive the same booklet. The 1988 writing trend assessment followed a partial BIB design, whereby certain books containing writing items were selected from the 1984 BIB-spiral assessment and printed intact. Thus, blocks of writing items generally appeared in two booklets.

After the assessment booklets were returned to NAEP, open-ended items were scored by trained readers. The writing items included in the 1984-1988 trend assessment were submitted to three types of scoring: primary trait, holistic, and mechanics. TABLE A.3 summarizes the sample sizes for each task and scoring method. The sections that follow provide information on these methods and the different perspectives they yield.

The NAEP writing data were weighted in accordance with the population structure. This weighting reflects the probability of selection of each student, adjusts for nonresponse, and — through a process known as poststratification — assures that the representation of certain subpopulations corresponds to figures based on the Census and the Current Population Survey.[11]

TABLE A.3 Sample Sizes for the Writing Trend Assessment by Task and Scoring Method

THE NATION'S REPORT CARD

Writing Task	Scoring Method	1984 Grade 4	1984 Grade 8	1984 Grade 11	1988 Grade 4	1988 Grade 8	1988 Grade 11
INFORMATIVE							
Plants	Primary	656	—	—	1285	—	—
XYZ Company	Primary	544	616	—	1152	1334	—
Appleby House	Primary	530	588	599	925	1256	1041
Food on the Frontier	Primary	—	603	629	—	1339	1212
Food on the Frontier	Holistic	—	1184	1180	—	1247	1192
Job Application	Primary	—	—	603	—	—	1169
PERSUASIVE							
Spaceship	Primary	611	—	—	1258	—	—
Spaceship	Holistic	1161	—	—	1257	—	—
Spaceship	Mechanics	506	—	—	481	—	—
Radio Station	Primary	585	612	—	1234	1364	—
Dissecting Frogs	Primary	—	641	—	—	1356	—
Rec. Opportunities	Primary	—	494	521	—	1372	1242
Rec. Opportunities	Holistic	—	1286	1254	—	1302	1182
Rec. Opportunities	Mechanics	—	473	517	—	516	497
Space Program	Primary	—	—	632	—	—	1195
Bike Lane	Primary	—	—	636	—	—	1178
IMAGINATIVE							
Flashlight	Primary	609	—	—	614	—	—
Flashlight	Holistic	940	—	—	615	—	—

[11] *The NAEP 1987-88 Technical Report* will provide further details on weighting and its effects on proficiency estimation.

Primary Trait Scoring: Evaluating Task Accomplishment

A primary trait scoring guide was developed for each writing task to focus raters' attention on how successfully students' responses accomplished the task set forth in the prompt. As illustrated in the overview to this report, the guides typically defined five levels of task accomplishment — **not rated, unsatisfactory, minimal, adequate,** and **elaborated** — based on the rhetorical demands of the task. (A few of the scoring guides did not define an "elaborated" category as it was not appropriate to do so given the nature of the tasks.)

A group of trained raters carried out the primary trait scoring over a period of several months. Prior to scoring the responses to each task, an intensive training session was conducted by NAEP staff in the use of the scoring guide for that task. Although the quality of the scoring for previous assessments of writing has been consistently high, we recognized that there might be differences between the ratings provided by the group of scorers assembled in 1988 and the scorers assembled in 1984. Any such differences could be due to a consistent change such as an increase in the stringency of the ratings, or simple variation in scoring between the two years, or a combination of the two. If uncontrolled, a between-year scorer effect would add a confounding factor detrimental to the measurement of trends in writing ability.

The most direct way of controlling the effect of across-year variation in scoring is to eliminate it entirely by rescoring all of the 1984 responses to the trend writing tasks, using the same set of scorers that evaluate the 1988 responses. Unfortunately, resources did not permit rescoring the full set of 1984 writing papers, but did provide for rescoring a subsample of the papers written in 1984. For each of the writing tasks, 25 percent of the 1984 papers were sampled and interspersed with the 1988 papers. All responses (from 1988 and from the 1984 subsample) to each writing task were then scored for task accomplishment. The rescoring of the 1984 papers permitted a study of the consistency of scoring across years.

A comparison of the rescored 1984 data with the original 1984 data indicated that the between-year percentage of *exact* agreement in scoring ranged from 70 percent to 94 percent, averaging 90 percent at grade 4, 76 percent at grade 8, and 80 percent at grade 11. However, there was a slight tendency for the 1988 scores to be more stringent and NAEP did not want variability between the two sets of scorers to bias the trend results. Consequently, to eliminate the effects of between-year differences in scoring, the 1984 estimates of task accomplishment given in this report are based on the rescored data only rather than on the full set of the 1984 data.

Twenty percent of the responses were also rescored by a second rater to give an estimate of interrater reliabilities. As shown in TABLE A.4, which provides correlations and percentages of exact agreement between the first and second raters, the interrater reliabilities were generally quite high.

The Writing Scale: Average Response Method (ARM) Scaling

Based on the primary trait scores for responses to the writing tasks presented in the 1988 and the 1984 assessments, the writing trend data were scaled using the Average Response Method (ARM). The ARM provides an estimate of average writing achievement for each respondent as if he or she had taken 11 of the 12 writing tasks given and as if NAEP had computed average achievement (the average primary trait score times 100) across that set of tasks.[12] The ARM technology, which is based on estimates of the interrelation-

[12]As previously noted, the numeric values of the primary trait scores are 0 = not rated, 1 = unsatisfactory, 2 = minimal, 3 = adequate, and 4 = elaborated.

TABLE A.4

Percentages of Exact Score Point Agreement and Correlation Coefficients for Primary Trait Scoring of 1984 and 1988 Papers

THE NATION'S REPORT CARD

	Task	Percent Exact Agreement	Reliability Coefficient
Age 9 Grade 4	XYZ Company	97.1	.99
	Radio Station	93.5	.95
	Appleby House	90.3	.92
	Flashlight	87.5	.88
	Plants	94.3	.95
	Spaceship	91.8	.95
Age 13 Grade 8	Recreation Opportunities	85.4	.82
	Food on the Frontier	79.9	.68
	Dissecting Frogs	76.1	.64
	XYZ Company	93.5	.92
	Radio Station	87.0	.89
	Appleby House	75.3	.69
Age 17 Grade 11	Recreation Opportunities	90.8	.93
	Food on the Frontier	93.1	.86
	Appleby House	89.3	.89
	Space Program	89.9	.93
	Job Application	92.3	.92
	Bike Lane	84.9	.87

Note: The primary trait scoring conducted in 1988, was based on five scoring categories, as described in the overview of this report.

ships among tasks given to the same students, was first used to analyze and report results from the 1984 writing assessment. One fourth-grade task (Flashlight) could not be included in the scale because the task was not paired with any other writing tasks in either the 1984 or the 1988 assessment.

The Average Response Method of scaling nonbinary data combines linear models technology with multiple imputation procedures to produce a set of plausible values for every student. Each set of plausible values predicts what that student's average score across the set of 11 writing tasks might be, based on the student's responses to the particular tasks presented and on the student's status on a variety of demographic and background variables. Since it was first used in 1984, the Average Response Method has been general-

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ized to provide for performance comparisons across grades, based on a linking subset of items, and to allow the inclusion of new writing tasks in the scale.[13]

Holistic Scoring: Evaluating Writing Fluency

To offer another perspective on students' writing abilities, selected tasks included in the trend assessment were scored holistically for overall fluency (i.e., a global view of the ideas, language facility organization, mechanics and syntax of each paper taken as a whole). As previously noted, these tasks were "Spaceship" and "Flashlight" at grade 4, and "Recreation Opportunities" and "Food on the Frontier" at grades 8 and 11. Trained readers evaluated the relative fluency of students' writing on a 6-point scale. A small percentage of papers — such as those that were blank or indecipherable — were not rated.

The holistic scale was anchored by chief readers and table leaders chosen for their expertise in holistic scoring. This group studied the pool of student responses to select papers that represented each point on the holistic scale, then used these sample papers to train a group of approximately 75 raters. Using the sample papers as a guide, the raters were asked to determine whether papers corresponded to the top half or the bottom half of the holistic scale, then to make finer distinctions between adjacent points of the scale. The raters were divided into two groups, such that one large group was responsible for rating eighth and eleventh graders' responses, and a smaller second group was responsible for rating fourth graders' responses. Because the emphasis of the holistic scoring was to detect trends over time at each of the three grade levels assessed, where a task was given at more than one grade level, responses were rated separately for each grade. A training session preceded the scoring of responses to each task at each grade level.

Because student papers are evaluated relative to one another in holistic scoring — rather than against specific criteria, as with primary trait scoring — the distribution of scores for the total sample of papers should be approximately normal, with scores evenly distributed around the center of the scale. To detect changes in writing fluency across time at each grade level, papers from the 1984 and 1988 assessments were randomly mixed prior to scoring. Thus, if more papers from either assessment were judged to be in the "top half" of the scale, the results would indicate changes over time in overall writing fluency.

Twenty percent of the papers scored holistically were scored again by a second reader to provide information on interrater scoring agreement. These data are presented in TABLE A.5.

Relationship Between Primary Trait and Holistic Scores

Since certain writing items included in the 1984-1988 trend assessment were submitted to both holistic and primary trait scoring, it is also possible to examine the relationship between the two sets of scores. As shown in TABLE A.6, the correlations range from .38 to .66.

While the two scoring measures are clearly related, it is evident that they capture somewhat different aspects of writing performance. The primary trait score is closely tied to the features of specific writing tasks, providing a measure of students' success in accomplishing the assigned purpose of the writing. Alternatively, the holistic score provides a general measure of writing fluency,

[13] A general description of the Average Response Method can be found in Albert E. Beaton and Eugene G. Johnson, "The Average Response Method of Scaling," *Journal of Educational Statistics* (1989), Vol. 14, No 4. Further details on this procedure as it was applied to the scaling of the writing trend data can be found in the forthcoming *NAEP 1987-88 Technical Report*.

since the impression marks that raters give are affected by writers' attention to organization, adherence to the conventions of written English, word choice, handwriting, and quality of ideas.

Mechanics Scoring

To provide for an examination of trends in students' control of the conventions of written English, NAEP evaluated a random subsample of the 1984 and 1988 writing responses using the mechanics scoring criteria it used to evaluate writing responses from the 1984 assessment.[14] One task at each grade level was selected for the mechanics scoring; these tasks were "Spaceship" at grade 4 and "Recreation Opportunities" at grades 8 and 11. A random probability sample of approximately 500 responses to each item at each grade level for each year was selected for evaluation. To ensure that the comparisons between Black and White students were reasonably precise, Black students were over-

TABLE A.5

Correlation Coefficients for Holistic Scoring Conducted in 1988

THE NATION'S REPORT CARD

	1984 Papers • Age/Grade			1988 Papers • Age/Grade		
	9/4	13/8	17/11	9/4	13/8	17/11
Spaceship	.75	—	—	.64	—	—
Flashlight	.73	—	—	.83	—	—
Recreation Opportunities	—	.70	.79	—	.77	.68
Food on the Frontier	—	.69	.72	—	.73	.64

Note: The holistic scoring was based on 7 scoring categories.

TABLE A.6

Correlation Coefficients Between Primary Trait and Holistic Scores

THE NATION'S REPORT CARD

	1984 Papers			1988 Papers		
	4	8	11	4	8	11
Spaceship	.63	—	—	.66	—	—
Flashlight	.58	—	—	.63	—	—
Recreation Opportunities	—	.43	.38	—	.46	.46
Food on the Frontier	—	.44	.45	—	.43	.41

[14] Arthur N. Applebee, Judith A. Langer, and Ina V.S. Mullis, *Grammar, Punctuation, and Spelling: Controlling the Conventions of Written English* (Princeton, NJ: Educational Testing Service, National Assessment of Educational Progress, 1987).

sampled. Thus, results from the analysis of students' grammar, punctuation, and spelling can be reported for the nation as well as for certain subpopulations defined by race/ethnicity and gender.

In the mechanics scoring, each response was analyzed for a variety of aspects of spelling, punctuation, grammar, word choice, and syntax by English teachers who had been trained in the use of detailed criteria. The entire text of the scored papers, with the scoring marks, was then entered into a computer-readable database to provide for the subsequent analyses.

An outline of the features of writing mechanics included in the scoring and analysis is provided below.

I. Sentence Types

1. **Simple** — A sentence that contains a subject and a verb. It may also have an object, subject complement, phrase, appositive, nominative absolute or verbal. Also, a word group used in dialogue, for emphasis, or as an exclamation that is not an independent clause.

2. **Compound** — A sentence containing two or more simple sentences joined by something other than a comma.

3. **Complex (and compound-complex)** — A sentence that contains at least one independent clause and one dependent clause.

   Sentence types with punctuation errors were not classified in the above categories.

4. **Run-on Sentence**

   a. Fused — A sentence containing two or more independent clauses with no punctuation or conjunction separating them.

   b. On and on — A sentence consisting of four or more independent clauses strung together with conjunctions.

   c. Comma splice — A sentence containing two or more independent clauses separated by a comma instead of a semicolon or a coordinating conjunction.

5. **Fragment** — A word group, other than an independent clause, written and punctuated as a sentence.

II. Faulty Sentence Construction

(These scores are in addition to the sentence types.)

1. **Agreement Error** — A sentence where at least one of the following is present: subject/verb do not agree, pronoun/antecedent do not agree, noun/modifier do not agree, subject/object pronoun is misused, or verb tense shifts.

2. **Awkward Sentence** (The awkward categories are listed in order of category precedence, since only one score was given to a sentence.)

   a. Faulty parallelism — A parallel construction that is semantically or structurally dysfunctional.

   b. Unclear pronoun reference — A pronoun's antecedent is unclear.

   c. Illogical construction — Faulty modification or a dangling modifier or a functionally misarranged or misproportioned sentence.

   d. Other dysfunctions — A sentence containing an omitted or extra word or a split construction that definitely detracts from readability.

III. Punctuation Errors

Every error of commission and error of omission was coded for commas, dashes, quotation marks, semicolons, apostrophes, and end marks. The most informal rules of usage were used, with the writer receiving the benefit of any doubt.

IV. Word-Level Conventions

1. **Word Choice** — The writer needs a word that is different from the one written. This category also includes attempts at a verb, adjective, or adverb form that is nonexistent or unacceptable.

2. **Spelling** — In addition to a misspelling, this category includes word-division errors at the end of a line, two words written as one, one word written as two, superfluous plurals, and groups of distinguishable letters that do not make a legitimate word.

3. **Capitalization** — A word is given a capitalization error score if the first word in a sentence is not capitalized, if a proper noun or adjective within a sentence is not capitalized, and if the pronoun "I" is not capitalized.

The mechanics scoring was designed to allow the writer as much flexibility as possible under existing conventions of correct writing; consequently, any time two authorities on mechanics disagreed, the more informal interpretation was used.

Because the papers were entered into a computer-readable database, the number of words per paper, number of words per sentence, and number of letters per word were tabulated by computer.

Estimating Variability in Proficiency Measures

Since the statistics presented in this report are estimates of population and subpopulation characteristics, rather than the actual (unknown) values of those characteristics, it is important to have measures of the degree of uncertainty of the estimates. Two components of uncertainty are accounted for in statistics based on the NAEP data: (1) uncertainty due to sampling variability, and (2) uncertainty arising because scale scores for each respondent are based on a relatively small number of cognitive items.

The sampling variance provides a measure of the dependence of the results on the particular sample achieved. Because NAEP uses complex sampling procedures, conventional formulas for estimating sampling variability that assume simple random sampling are inappropriate. To account for the characteristics of its complex sample design, NAEP uses a jackknife replication procedure to estimate sampling variability. Briefly, the jackknife procedure estimates the sampling variance of a statistic by repeatedly altering the sample in a controlled manner and recomputing the statistic based on the altered sample.[15] The jackknife variance estimate is based on the variability of the statistics from the altered samples. The square root of the jackknife variance estimate of a statistic is the sampling standard error of that statistic. This standard error includes all possible nonsystematic error associated with administering specific items to designated students in controlled situations.

The jackknifed standard error provides a reasonable measure of uncertainty for any statistic based on values observed without error. Population scores for cognitive items meet this requirement, but scaled-score proficiency values do not. Because each student typically responds to relatively few items, there exists a nontrivial amount of imprecision in the measurement of the proficiency values for any given student. This imprecision adds an additional component of variability to statistics based on scale-score proficiency values. This component is estimated by assessing the dependence of the value of the statistic on the particular set of student level estimated proficiencies used in its computation. The measure of the overall variability of a statistic based on scale scores is the sum of the component due to imprecision of measurement and the jackknife sampling variance, and the standard error of the statistic is the square root of this sum.[16]

NAEP Reporting Groups

NAEP does not report performance results for individual students, but rather for groups of students and for the nation as a whole. Information about region and size/type of community was obtained from the sampling frame, which gives information about the country and urbanicity of the school's location, and from responses given by the school principal detailing the occupation profile of the parents of the school's student body, and the size of the community served by the school. Information as to the sex of each student was obtained from school records. Other group results are based on student answers to the common core of background questions administered to all assessed students. In addition to national results, this report contains information about subgroups defined by race/ethnicity, sex, and region of the country. Definitions of these groups follow.

[15] For further details, see Eugene G. Johnson, "Considerations and Techniques for the Analysis of NAEP Data," *Journal of Educational Statistics* (1989), Vol. 14, No. 4.

[16] For a complete description of NAEP variance estimation, see *Expanding the New Design: The NAEP 1985-86 Technical Report* (Princeton, NJ: Educational Testing Service, National Assessment of Educational Progress, 1988).

Race/Ethnicity

Results are presented for Black, White, and Hispanic students, but not for other racial/ethnic groups because the sample sizes were not large enough to provide reliable estimates. Classifications of students' race/ethnicity are based on their responses to two questions:

1. Are you

A. American Indian or Alaskan Native
B. Asian or Pacific Islander
C. Black
D. White
E. Other (What?) _____

2. Are you Hispanic?

A. No
B. Yes, Mexican, Mexican American, or Chicano
C. Yes, Puerto Rican
D. Yes, Cuban
E. Yes, other Spanish/Hispanic (What?) _____

Students who chose any of the "yes" response options in question 2 were classified as Hispanic.

Gender

The Nation's Report Card analyzes and reports results for males and females.

Region

For reporting purposes, the country is divided into four regions: Northeast, Southeast, Central, and West, shown in the map below.

The Writing Background Factors

As previously noted, students participating in the writing trend assessments were asked to answer a series of questions on their attitudes toward writing, the value they placed on writing, and their instructional experiences. Responses to these questions were used to create the five composite factors presented in Chapter Three: Value Placed on Writing, General Attitudes Toward Writing, Personal and Social Uses of Writing, Revising Strategies, and Teacher Feedback on Writing. The questions included in each factor are provided below.

Overall Value Placed on Writing (Grades 8 and 11)

How often is each of the following sentences true for you?

- Writing helps me to think more clearly.
- Writing helps me tell others what I think.
- Writing helps me tell others how I feel about things.
- Writing helps me understand my own feelings about things.
- People who write well have a better chance of getting good jobs.
- People who write well are more influential.

General Attitudes Toward Writing (Grades 4, 8, and 11)

How often is each of the following sentences true for you?

- I like to write.
- I am a good writer.
- People like what I write.
- I write on my own outside of school.
- If I didn't have to write for school, I wouldn't write anything.

Personal and Social Uses of Writing (Grades 8 and 11)

How often do you write each of the following things?

- Letters to friends or relatives
- Notes and messages
- Stories or poems that are not schoolwork

Revising Strategies (Grades 4, 8, and 11)

How often do you do each of the following to make your papers better?

Move some sentences or paragraphs to different parts of the paper.

Add new ideas or information.

Take out parts of the paper that you don't like.

Change some words for other words that you like better.

Correct mistakes in spelling.

Correct mistakes in grammar.

Correct mistakes in punctuation.

Rewrite almost all of the paper.

Throw out the first paper and start again.

Teacher Feedback on Writing (Grades 4, 8, and 11)

How often does the teacher do each of the following things with your writing?

Mark the mistakes in your paper.

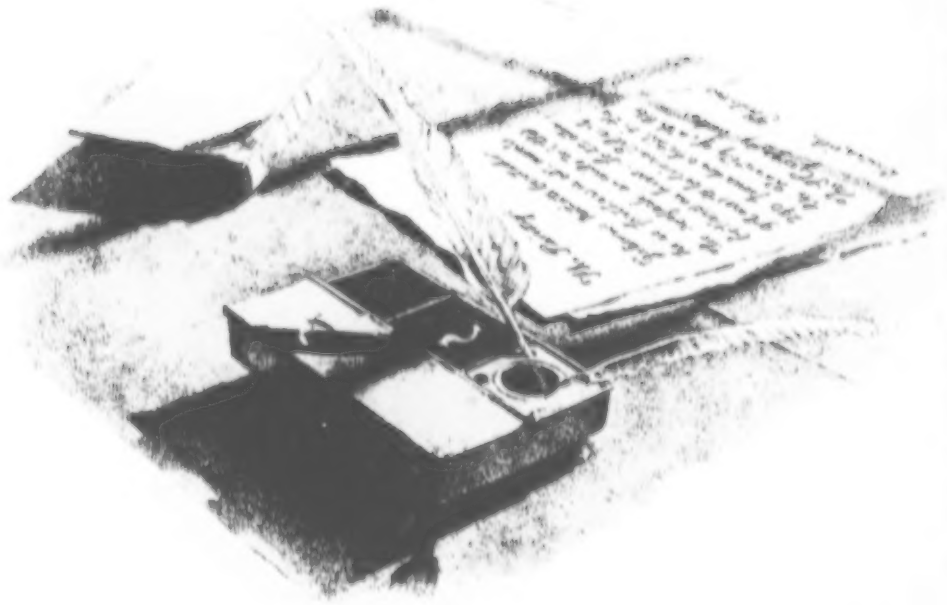
Write notes on your paper.

Point out what you did well.

Point out what you did not do well.

Make suggestions about what you should do the next time you write.

Show an interest in what you write.



DATA APPENDIX

THE FOLLOWING DATA TABLES supplement the information presented in this report. The first section provides the primary trait and holistic scores for each item included in the 1984 to 1988 writing trend assessment. The second section presents information on average writing proficiency (based on the Average Response Method analyses previously described) and percentile distributions for students in each grade. The third section includes additional information on students' writing mechanics.

The final section contains figures reproduced from *Writing Trends Across the Decade: 1974-1984;* these provide information on trends in students' writing achievement, based on the earlier NAEP assessments.

Grade 4: Percentages of Students at Each Score Point, Means, and Standard Errors for Items Scored by Primary Trait and Holistic Methods

PLANTS: PRIMARY TRAIT

	Not Rated (0)	Unsatisfactory (1)	Minimal (2)	Adequate (3)	Elaborated (4)	Minimal or Better (2,3,4)	Adequate or Better (3,4)	Mean
1984	1.4 (0.4)	14.7 (1.4)	43.8 (2.3)	40.0 (2.2)	[Not	83.9 (1.6)	—	2.22 (0.03)
1988	1.3 (0.6)	16.0 (1.4)	42.5 (1.6)	40.2 (1.8)	Applicable]	82.7 (1.7)	—	2.22 (0.03)

XYZ COMPANY: PRIMARY TRAIT

	(0)	(1)	(2)	(3)	(4)	(2,3,4)	(3,4)	Mean
1984	3.8 (1.2)	50.1 (2.6)	8.6 (1.2)	37.5 (2.3)	[Not	46.1 (2.4)	—	1.80 (0.05)
1988	2.8 (0.4)	52.8 (1.8)	8.7 (0.9)	35.6 (1.9)	Applicable]	44.3 (1.8)	—	1.77 (0.04)

SPACESHIP: PRIMARY TRAIT

	(0)	(1)	(2)	(3)	(4)	(2,3,4)	(3,4)	Mean
1984	6.9 (1.1)	30.0 (1.8)	43.1 (2.2)	19.7 (1.4)	0.3 (0.2)	63.1 (2.2)	20.0 (1.4)	1.77 (0.04)
1988	5.2 (0.6)	33.2 (1.3)	36.7 (1.6)*	23.7 (1.7)	1.2 (0.4)	61.6 (1.1)	24.9 (1.7)*	1.82 (0.02)

SPACESHIP: HOLISTIC

	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(4,5,6)
1984	8.8 (1.0)	20.8 (1.4)	32.8 (1.5)	23.5 (1.5)	11.3 (1.1)	2.3 (0.6)	0.4 (0.4)	14.0 (1.2)
1988	6.8 (0.6)	19.8 (1.4)	33.0 (1.4)	24.8 (1.5)	13.2 (1.3)	1.8 (0.5)	0.7 (1.3)	15.7 (1.3)

	Mean
1984	2.16 (0.04)
1988	2.26 (0.04)

RADIOTATION: PRIMARY TRAIT

	(0)	(1)	(2)	(3)	(4)	(2,3,4)	(3,4)	Mean
1984	6.9 (1.0)	50.0 (1.9)	31.7 (2.2)	11.3 (1.6)	0.1 (0.1)	43.1 (2.0)	11.4 (1.6)	1.48 (0.03)
1988	4.8 (0.7)	46.6 (1.4)	33.5 (1.3)	15.1 (1.2)	0.0 (0.0)	48.6 (1.6)*	15.1 (1.2)	1.59 (0.03)*

APPLEBY HOUSE: PRIMARY TRAIT

	(0)	(1)	(2)	(3)	(4)	(2,3,4)	(3,4)	Mean
1984	4.3 (1.1)	28.7 (2.1)	50.8 (2.2)	16.2 (1.3)	0.0 (0.0)	67.0 (2.5)	16.2 (1.3)	1.79 (0.04)
1988	2.2 (0.6)	24.6 (1.3)	49.5 (1.4)	23.7 (1.7)*	0.0 (0.0)	73.2 (1.1)*	23.7 (1.7)*	1.95 (0.02)*

FLASHLIGHT: PRIMARY TRAIT

	(0)	(1)	(2)	(3)	(4)	(2,3,4)	(3,4)	Mean
1984	0.9 (0.3)	35.9 (2.3)	54.6 (2.0)	8.5 (1.5)	0.1 (0.2)	63.2 (2.4)	8.6 (1.5)	1.71 (0.03)
1988	1.7 (0.6)	33.2 (2.5)	50.9 (2.5)	13.8 (2.0)*	0.4 (0.4)	65.1 (2.7)	14.3 (2.0)*	1.78 (0.04)

FLASHLIGHT: HOLISTIC

	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(4,5,6)
1984	7.6 (1.1)	10.7 (1.0)	22.7 (1.8)	25.0 (1.8)	19.5 (1.5)	10.3 (1.5)	4.2 (0.9)	34.0 (2.4)
1988	2.0 (0.6)*	8.0 (1.2)	24.8 (1.9)	27.9 (1.8)	21.1 (1.7)	10.5 (1.3)	5.8 (0.7)	37.4 (2.4)

	Mean
1984	2.66 (0.09)
1988	3.13 (0.07)*

*Shows statistically significant difference between years at the .05 level. Jackknifed standard errors are presented in parentheses.

Grade 8: Percentages of Students at Each Score Point, Means, and Standard Errors for Items Scored by Primary Trait and Holistic Methods

RECREATION OPPORTUNITY: PRIMARY TRAIT

	Not Rated (0)	Unsatisfactory (1)	Minimal (2)	Adequate (3)	Elaborated (4)	Minimal or Better (2,3,4)	Adequate or Better (3,4)	Mean
1984	2.2 (0.7)	47.6 (2.5)	40.5 (2.6)	9.6 (1.4)	0.2 (0.2)	50.2 (2.7)	9.7 (1.4)	1.58 (0.04)
1988	3.1 (0.6)	52.3 (1.7)	37.4 (1.2)	7.2 (0.9)	0.1 (0.1)	44.6 (1.7)	7.2 (0.9)	1.49 (0.02)*

RECREATION OPPORTUNITY: HOLISTIC

	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(4,5,6)
1984	5.7 (0.7)	8.3 (0.8)	17.5 (1.3)	29.2 (1.5)	25.0 (1.3)	10.2 (1.0)	4.0 (0.5)	39.2 (1.8)
1988	2.9 (0.5)*	6.9 (0.9)	17.8 (1.2)	28.4 (1.4)	29.9 (1.2)*	11.7 (1.0)	2.9 (0.5)	43.9 (1.6)

	Mean
1984	3.06 (0.05)
1988	3.20 (0.05)*

FOOD ON THE FRONTIER: PRIMARY TRAIT

	(0)	(1)	(2)	(3)	(4)	(2,3,4)	(3,4)	Mean
1984	0.8 (0.4)	19.2 (1.8)	71.3 (1.7)	8.5 (1.4)	0.2 (0.1)	80.0 (1.9)	8.7 (1.4)	1.88 (0.03)
1988	0.6 (0.3)	20.9 (1.7)	65.7 (1.8)*	12.5 (1.3)*	0.3 (0.1)	78.5 (1.7)	12.8 (1.3)*	1.91 (0.03)

FOOD ON THE FRONTIER: HOLISTIC

	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(4,5,6)
1984	3.8 (0.6)	10.0 (0.8)	21.5 (1.3)	29.7 (1.4)	23.3 (1.1)	8.9 (0.9)	2.9 (0.6)	35.0 (1.4)
1988	1.2 (0.5)*	12.4 (1.4)	21.5 (1.3)	30.5 (1.4)	22.1 (1.7)	7.9 (1.2)	4.4 (0.7)	34.5 (2.1)

	Mean
1984	2.97 (0.05)
1988	3.02 (0.06)

DISSECTING FROGS: PRIMARY TRAIT

	(0)	(1)	(2)	(3)	(4)	(2,3,4)	(3,4)	Mean
1984	1.0 (0.4)	14.4 (1.4)	70.9 (1.8)	10.4 (1.2)	0.2 (0.2)	84.6 (1.4)	10.6 (1.2)	1.94 (0.02)
1988	0.8 (0.2)	16.9 (1.7)	65.9 (1.9)*	15.9 (1.1)*	0.4 (0.2)	82.2 (1.7)	16.3 (1.1)*	1.98 (0.02)

XYZ COMPANY: PRIMARY TRAIT

	(0)	(1)	(2)	(3)	(4)	(2,3,4)	(3,4)	Mean
1984	0.0 (0.0)	15.7 (1.4)	11.9 (1.5)	72.5 (1.9)	(Not	84.3 (1.4)		2.57 (0.03)
1988	0.3 (0.2)	21.4 (1.4)*	7.5 (0.8)*	70.7 (1.4)	Applicable)	78.3 (1.4)*		2.49 (0.03)

RADIO STATION: PRIMARY TRAIT

	(0)	(1)	(2)	(3)	(4)	(2,3,4)	(3,4)	Mean
1984	0.2 (0.2)	27.2 (1.7)	41.8 (1.9)	30.2 (1.9)	0.6 (0.2)	72.6 (1.7)	30.7 (1.9)	2.04 (0.03)
1988	0.6 (0.2)	33.4 (1.5)*	40.8 (1.6)	24.8 (1.0)*	0.4 (0.2)	66.1 (1.5)*	25.3 (1.0)*	1.91 (0.02)*

APPLEBY HOUSE: PRIMARY TRAIT

	(0)	(1)	(2)	(3)	(4)	(2,3,4)	(3,4)	Mean
1984	0.4 (0.3)	9.6 (1.5)	44.2 (2.4)	44.1 (2.4)	1.6 (0.5)	90.0 (1.5)	45.8 (2.4)	2.37 (0.03)
1988	0.3 (0.2)	10.2 (1.1)	40.9 (1.8)	47.4 (1.6)	1.3 (0.3)	89.5 (1.1)	48.7 (1.6)	2.39 (0.02)

*Shows statistically significant difference between years at the .05 level. Jackknifed standard errors are presented in parentheses.

Grade 11: Percentages of Students at Each Score Point, Means, and Standard Errors for Items Scored by Primary Trait and Holistic Methods

RECREATION OPPORTUNITY: PRIMARY TRAIT

	Not Rated (0)	Unsatisfactory (1)	Minimal (2)	Adequate (3)	Elaborated (4)	Minimal or Better (2,3,4)	Adequate or Better (3,4)	Mean
1984	0.6 (0.4)	26.0 (2.4)	56.8 (3.0)	16.3 (2.2)	0.3 (0.3)	73.5 (2.5)	16.6 (2.0)	1.98 (0.04)
1988	2.9 (0.4)*	29.3 (1.6)	47.3 (1.5)*	19.7 (1.7)	0.8 (0.2)	67.8 (1.6)	20.5 (1.7)	1.86 (0.03)

RECREATION OPPORTUNITY: HOLISTIC

	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(4,5,6)
1984	3.9 (0.7)	3.8 (0.5)	10.3 (1.1)	29.1 (1.4)	33.3 (1.7)	14.4 (1.1)	5.2 (0.9)	52.8 (1.7)
1988	1.4 (0.2)*	3.1 (0.7)	11.4 (1.1)	24.7 (1.4)*	39.8 (1.3)*	16.3 (1.1)	3.3 (0.6)	59.3 (1.7)*

	Mean
1984	3.48 (0.05)
1988	3.60 (0.04)

FOOD ON THE FRONTIER: PRIMARY TRAIT

	(0)	(1)	(2)	(3)	(4)	(2,3,4)	(3,4)	Mean
1984	1.6 (0.7)	13.6 (1.5)	71.4 (1.7)	12.8 (1.3)	0.6 (0.4)	84.8 (1.6)	13.4 (1.3)	1.97 (0.03)
1988	1.5 (0.4)	8.7 (1.2)*	75.7 (1.6)	13.7 (1.1)	0.5 (0.2)	89.9 (1.2)*	14.2 (1.2)	2.03 (0.02)

FOOD ON THE FRONTIER: HOLISTIC

	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(4,5,6)
1984	2.7 (0.5)	5.5 (0.9)	13.1 (0.9)	25.6 (1.6)	30.8 (1.2)	16.4 (1.1)	6.1 (1.1)	53.3 (1.8)
1988	1.0 (0.3)*	5.2 (0.9)	12.0 (1.0)	28.3 (1.4)	34.4 (1.6)	15.5 (1.2)	3.5 (0.6)	53.5 (2.1)

	Mean
1984	3.50 (0.05)
1988	3.51 (0.06)

SPACE PROGRAM: PRIMARY TRAIT

	(0)	(1)	(2)	(3)	(4)	(2,3,4)	(3,4)	Mean
1984	5.8 (1.1)	14.6 (1.8)	54.7 (2.4)	23.6 (1.8)	1.3 (0.4)	79.6 (2.2)	24.8 (1.8)	2.00 (0.04)
1988	3.2 (0.5)*	17.5 (1.5)	51.5 (2.0)	26.9 (1.6)	1.0 (0.3)	79.4 (1.6)	27.9 (1.6)	2.05 (0.03)

JOB APPLICATION: PRIMARY TRAIT

	(0)	(1)	(2)	(3)	(4)	(2,3,4)	(3,4)	Mean
1984	1.4 (0.4)	14.4 (1.7)	16.2 (2.0)	65.4 (2.1)	2.7 (0.6)	84.3 (1.6)	68.0 (2.1)	2.54 (0.03)
1988	1.3 (0.4)	12.8 (0.8)	17.5 (1.4)	64.4 (1.9)	4.1 (0.9)	85.9 (1.0)	68.4 (1.7)	2.57 (0.03)

APPLEBY HOUSE: PRIMARY TRAIT

	(0)	(1)	(2)	(3)	(4)	(2,3,4)	(3,4)	Mean
1984	1.6 (0.5)	10.0 (1.3)	35.8 (2.0)	50.5 (1.7)	2.1 (0.7)	88.3 (1.3)	52.6 (1.9)	2.41 (0.03)
1988	0.8 (0.3)	8.9 (1.1)	37.0 (1.8)	52.0 (2.1)	1.3 (0.4)	90.3 (1.2)	53.3 (2.2)	2.44 (0.03)

BIKE LANE: PRIMARY TRAIT

	(0)	(1)	(2)	(3)	(4)	(2,3,4)	(3,4)	Mean
1984	1.7 (0.5)	30.7 (1.8)	42.7 (2.7)	24.3 (2.1)	0.6 (0.3)	67.6 (1.7)	24.9 (2.1)	1.91 (0.03)
1988	0.9 (0.4)	29.7 (2.1)	48.1 (2.0)	21.0 (1.5)	0.3 (0.1)	69.4 (2.1)	21.4 (1.5)	1.90 (0.03)

*Shows statistically significant difference between years at the .05 level. Jackknifed standard errors are presented in parentheses.

Average Response Method (ARM) Means, Standard Deviations, and Percentiles of Writing Distributions with Standard Errors

GRADE 4		1984	1988
NATION			
Mean		170.5 (1.7)	173.3 (1.3)
Std. Deviation		47.6 (1.5)	43.4 (1.1)
Percentiles	5	89.5 (3.2)	101.4 (2.5)
	10	108.1 (3.5)	116.9 (2.0)
	25	138.6 (2.9)	143.6 (1.6)
	50	172.4 (1.8)	174.4 (2.2)
	75	203.2 (1.5)	203.5 (2.0)
	90	229.7 (2.5)	228.5 (2.5)
	95	246.0 (5.0)	243.3 (3.2)
MALE			
Mean		165.0 (2.7)	164.3 (1.9)
Std. Deviation		46.7 (1.3)	42.5 (1.2)
Percentiles	5	86.8 (5.5)	93.7 (2.5)
	10	104.3 (3.5)	109.7 (2.5)
	25	133.0 (3.9)	135.0 (1.7)
	50	166.4 (4.8)	165.6 (2.4)
	75	197.2 (2.3)	194.4 (2.6)
	90	225.0 (2.0)	218.7 (3.5)
	95	239.1 (5.9)	232.7 (4.9)
FEMALE			
Mean		176.7 (1.9)	182.4 (1.6)
Std. Deviation		47.7 (2.1)	42.5 (1.4)
Percentiles	5	92.1 (4.2)	110.6 (4.0)
	10	112.5 (4.5)	127.3 (2.4)
	25	145.9 (5.8)	154.1 (2.1)
	50	179.6 (1.9)	183.0 (1.8)
	75	209.8 (3.7)	211.7 (2.0)
	90	234.4 (3.8)	236.6 (2.3)
	95	251.2 (4.5)	251.9 (5.6)
WHITE			
Mean		177.2 (1.9)	180.0 (1.6)
Std. Deviation		45.7 (2.0)	41.8 (1.1)
Percentiles	5	99.2 (3.9)	110.2 (2.7)
	10	116.9 (3.3)	126.0 (2.1)
	25	146.3 (2.7)	151.6 (1.7)
	50	179.2 (2.5)	181.0 (2.5)
	75	208.6 (2.8)	208.7 (2.0)
	90	234.0 (3.9)	232.6 (3.4)
	95	250.2 (6.5)	247.6 (4.5)
BLACK			
Mean		148.2 (4.0)	150.7 (3.1)
Std. Deviation		47.0 (2.4)	42.4 (1.6)
Percentiles	5	69.9 (9.1)	81.1 (8.4)
	10	86.6 (7.0)	96.0 (5.6)
	25	115.7 (5.4)	121.8 (5.1)
	50	149.5 (6.0)	150.5 (2.8)
	75	180.8 (4.2)	179.2 (2.8)
	90	208.0 (5.9)	206.2 (4.4)
	95	224.7 (13.1)	220.4 (4.9)
HISPANIC			
Mean		157.9 (4.5)	162.2 (3.6)
Std. Deviation		48.0 (2.5)	43.1 (1.4)
Percentiles	5	80.9 (17.3)	93.5 (5.4)
	10	96.3 (8.1)	106.9 (3.9)
	25	125.3 (5.2)	131.2 (4.6)
	50	160.4 (5.4)	161.7 (5.9)
	75	190.2 (6.6)	191.5 (7.4)
	90	217.6 (7.9)	217.9 (5.5)
	95	230.1 (5.5)	234.5 (6.1)

GRADE 8		1984	1988
NATION			
Mean		212.4 (1.4)	208.2 (0.8)
Std. Deviation		45.3 (1.1)	40.1 (0.9)
Percentiles	5	136.3 (3.0)	140.9 (1.5)
	10	153.3 (2.2)	156.6 (2.8)
	25	182.5 (1.3)	181.5 (1.2)
	50	213.1 (1.7)	208.9 (1.1)
	75	243.6 (1.8)	235.6 (1.1)
	90	269.4 (3.2)	258.7 (1.7)
	95	285.3 (3.8)	273.3 (1.9)
MALE			
Mean		204.5 (2.4)	197.9 (1.4)
Std. Deviation		45.4 (2.1)	39.5 (1.2)
Percentiles	5	127.0 (4.7)	131.5 (3.5)
	10	143.9 (6.0)	146.3 (1.8)
	25	175.2 (3.9)	171.7 (2.0)
	50	205.4 (2.4)	198.3 (1.7)
	75	235.7 (3.6)	225.1 (2.4)
	90	261.6 (4.6)	248.3 (2.0)
	95	277.3 (5.3)	261.2 (2.5)
FEMALE			
Mean		220.5 (1.5)	218.2 (1.1)
Std. Deviation		43.7 (1.5)	38.2 (1.3)
Percentiles	5	148.7 (3.3)	154.4 (4.4)
	10	163.2 (4.3)	169.5 (3.4)
	25	190.6 (1.8)	192.8 (2.6)
	50	221.6 (3.0)	218.6 (2.3)
	75	250.7 (2.6)	244.0 (1.5)
	90	275.9 (3.6)	267.1 (2.5)
	95	290.3 (4.6)	280.0 (3.9)
WHITE			
Mean		217.9 (1.5)	213.1 (1.0)
Std. Deviation		43.8 (1.3)	39.5 (0.9)
Percentiles	5	144.6 (6.9)	146.4 (1.7)
	10	161.0 (2.3)	162.3 (2.8)
	25	189.0 (2.0)	187.6 (1.7)
	50	219.1 (2.2)	213.7 (1.3)
	75	247.6 (2.4)	240.1 (1.6)
	90	273.0 (2.4)	262.2 (2.4)
	95	288.6 (3.9)	277.2 (2.5)
BLACK			
Mean		188.3 (4.1)	190.1 (2.3)
Std. Deviation		43.7 (3.6)	37.7 (1.8)
Percentiles	5	114.6 (6.6)	127.2 (3.8)
	10	134.3 (15.5)	141.4 (5.8)
	25	160.2 (8.2)	165.2 (2.4)
	50	188.0 (8.6)	189.9 (2.4)
	75	217.6 (12.7)	215.6 (2.8)
	90	244.9 (8.7)	238.6 (3.7)
	95	260.9 (10.4)	251.7 (6.1)
HISPANIC			
Mean		194.2 (6.9)	197.2 (3.2)
Std. Deviation		45.7 (4.1)	38.7 (1.9)
Percentiles	5	121.0 (13.2)	130.6 (8.2)
	10	135.1 (7.6)	147.2 (4.4)
	25	162.0 (13.6)	172.9 (4.9)
	50	193.6 (10.5)	197.9 (4.7)
	75	225.3 (10.1)	223.4 (6.6)
	90	254.1 (9.7)	244.4 (3.9)
	95	268.6 (12.1)	258.8 (5.1)

Jackknifed standard errors are presented in parentheses.

Average Response Methods (ARM) Means, Standard Deviations, and Percentiles of Writing Distributions with Standard Errors

GRADE 11		1984	1988
NATION			
Mean		223.0 (2.1)	220.7 (1.2)
Std. Deviation		45.2 (1.0)	39.1 (1.2)
Percentiles	5	146.1 (3.6)	154.6 (2.7)
	10	164.0 (1.6)	170.7 (2.1)
	25	192.7 (1.8)	195.8 (1.8)
	50	224.0 (2.3)	221.6 (1.4)
	75	254.3 (2.5)	247.3 (2.1)
	90	280.1 (3.4)	269.6 (2.1)
	95	296.3 (5.5)	283.2 (2.6)
MALE			
Mean		211.9 (3.0)	211.1 (1.6)
Std. Deviation		45.3 (1.4)	39.1 (1.5)
Percentiles	5	136.8 (6.2)	145.0 (3.4)
	10	152.5 (3.1)	161.3 (4.2)
	25	182.0 (3.8)	186.5 (1.9)
	50	213.0 (3.3)	212.1 (1.5)
	75	242.9 (3.7)	237.7 (2.2)
	90	269.1 (3.4)	260.4 (4.0)
	95	284.6 (5.9)	274.0 (5.3)
FEMALE			
Mean		234.5 (2.4)	229.2 (1.4)
Std. Deviation		43.0 (1.3)	37.1 (1.2)
Percentiles	5	162.2 (7.6)	167.8 (3.8)
	10	179.7 (3.8)	182.9 (2.8)
	25	205.5 (3.0)	205.2 (2.1)
	50	235.1 (2.4)	229.9 (0.9)
	75	264.0 (2.7)	254.5 (2.9)
	90	289.1 (6.2)	275.6 (2.9)
	95	303.8 (5.7)	288.3 (3.6)
WHITE			
Mean		229.1 (2.1)	225.3 (1.3)
Std. Deviation		43.8 (1.6)	37.9 (1.4)
Percentiles	5	155.5 (4.2)	161.5 (6.0)
	10	172.9 (4.3)	176.8 (2.1)
	25	200.4 (1.6)	200.8 (1.9)
	50	229.7 (2.2)	226.2 (1.2)
	75	259.7 (2.8)	250.7 (2.1)
	90	284.4 (4.9)	273.0 (2.8)
	95	299.8 (5.9)	286.0 (2.3)
BLACK			
Mean		204.2 (4.1)	206.9 (2.6)
Std. Deviation		45.0 (3.9)	38.0 (1.7)
Percentiles	5	129.0 (13.0)	143.2 (6.5)
	10	146.7 (11.6)	158.0 (3.2)
	25	174.7 (5.4)	182.6 (4.1)
	50	203.5 (4.8)	206.7 (2.5)
	75	236.8 (5.5)	232.1 (4.1)
	90	261.9 (12.1)	257.1 (4.5)
	95	276.1 (10.3)	267.7 (8.0)
HISPANIC			
Mean		200.6 (4.6)	202.0 (3.2)
Std. Deviation		45.7 (3.1)	41.1 (3.3)
Percentiles	5	125.3 (31.1)	132.7 (8.1)
	10	143.5 (9.1)	148.4 (13.8)
	25	169.2 (4.2)	176.6 (3.3)
	50	201.9 (6.3)	201.8 (3.2)
	75	230.8 (6.5)	229.4 (4.5)
	90	257.1 (12.8)	253.4 (5.2)
	95	273.3 (11.2)	268.1 (5.2)

Jackknifed standard errors are presented in parentheses.

Grammar, Punctuation, and Spelling: Trends in the Characteristics of Good and Poor Papers

	Year	Task Accomplishment: Good Papers (Primary Trait) 3 & 4	Task Accomplishment: Poor Papers (Primary Trait) 1 & 2	Overall Fluency: Good Papers (Holistic) 4, 5, & 6	Overall Fluency: Poor Papers (Holistic) 1, 2, & 3
Number of words					
Grade 4	1988	51.3 (4.2)	29.7 (1.3)	63.3 (3.8)	29.0 (0.9)
	1984	48.1 (2.1)	28.1 (0.8)	57.6 (2.4)	29.3 (0.8)
Grade 8	1988	109.4 (8.0)*	68.2 (2.5)	94.5 (2.5)	52.3 (2.0)
	1984	88.0 (4.7)	63.3 (1.9)	97.7 (3.6)	49.9 (1.6)
Grade 11	1988	127.8 (5.6)	88.1 (2.2)	115.4 (2.5)	64.5 (2.5)
	1984	133.3 (7.2)	83.5 (1.7)	114.6 (4.5)	65.1 (3.1)
Word length					
Grade 4	1988	4.0 (0.1)	4.0 (0.1)	4.0 (0.1)	3.9 (0.1)
	1984	3.9 (0.1)	4.0 (0.1)	3.9 (0.1)	3.9 (0.1)
Grade 8	1988	4.2 (0.1)	4.1 (0.1)	4.1 (0.1)	4.1 (0.1)
	1984	4.1 (0.1)	4.1 (0.1)	4.1 (0.1)	4.1 (0.1)
Grade 11	1988	4.3 (0.1)	4.3 (0.1)	4.4 (0.1)	4.2 (0.1)
	1984	4.4 (0.1)	4.3 (0.1)	4.4 (0.1)	4.2 (0.1)
Number of sentences					
Grade 4	1988	3.8 (0.3)	2.4 (0.2)	4.8 (0.4)	2.3 (0.1)
	1984	3.9 (0.3)	2.3 (0.1)	4.5 (0.4)	2.4 (0.1)
Grade 8	1988	6.4 (0.7)	5.2 (0.3)*	7.3 (0.4)	3.7 (0.2)
	1984	7.4 (0.8)	4.3 (0.2)	7.2 (0.5)	3.6 (0.3)
Grade 11	1988	8.7 (0.7)	5.4 (0.2)	7.1 (0.2)	4.5 (0.3)
	1984	8.5 (0.5)	5.1 (0.1)	7.3 (0.3)	3.9 (0.2)
Number of words per sentence					
Grade 4	1988	16.0 (1.4)	14.9 (0.7)	15.6 (1.4)	15.3 (0.7)
	1984	15.8 (0.7)	14.5 (0.5)	15.5 (1.0)	14.7 (0.4)
Grade 8	1988	20.2 (2.7)	16.3 (0.5)	15.9 (0.7)	16.9 (0.7)
	1984	15.7 (0.9)	17.3 (0.4)	16.2 (0.7)	17.5 (0.7)
Grade 11	1988	16.8 (0.6)	18.0 (0.6)	17.6 (0.4)	18.2 (1.1)
	1984	16.1 (0.5)	18.6 (0.6)	16.5 (0.5)	20.1 (1.3)
Number of errors					
Grade 4	1988	5.1 (0.6)	5.3 (0.3)	6.2 (0.8)	5.0 (0.4)
	1984	6.1 (0.4)	4.5 (0.2)	6.4 (0.7)	4.7 (0.2)
Grade 8	1988	7.0 (0.8)	7.0 (0.5)*	8.6 (0.8)	5.8 (0.3)
	1984	10.4 (1.7)	5.6 (0.3)	8.7 (0.8)	5.7 (0.7)
Grade 11	1988	8.1 (1.2)	5.4 (0.4)	5.7 (0.5)	6.4 (0.8)
	1984	7.1 (0.7)	5.9 (0.2)	6.4 (0.4)	6.5 (0.5)
Error rate					
Grade 4	1988	10.0 (0.6)*	21.0 (1.8)	10.4 (1.5)	19.9 (1.7)
	1984	14.3 (1.3)	17.8 (0.9)	11.9 (2.0)	17.8 (0.8)
Grade 8	1988	6.6 (0.9)*	12.2 (1.4)	11.4 (2.5)	12.2 (0.7)
	1984	13.6 (2.6)	10.0 (0.7)	10.1 (1.2)	12.1 (1.5)
Grade 11	1988	10.4 (3.7)	7.5 (0.8)	6.0 (1.1)	11.3 (1.9)
	1984	6.7 (1.2)	7.9 (0.4)	6.7 (0.9)	10.4 (0.9)

*Shows statistically significant difference between years at the .05 level. Jackknifed standard errors are presented in parentheses.
Data for grade 4 are based on a different writing task than data for grades 8 and 11.

Trends in Sentence Errors for Good and Poor Papers

Year	Task Accomplishment: Good Papers (Primary Trait) 3 & 4	Task Accomplishment: Poor Papers (Primary Trait) 1 & 2	Overall Fluency: Good Papers (Holistic) 4, 5, & 6	Overall Fluency: Poor Papers (Holistic) 1, 2, & 3
Percentage run-on sentences				
Grade 4 1988	16.1 (4.2)	17.5 (2.7)	7.8 (2.1)	20.0 (2.7)
Grade 4 1984	18.3 (3.0)	14.9 (1.7)	13.5 (2.8)	16.3 (1.7)
Grade 8 1988	7.5 (4.5)	8.4 (1.3)	7.2 (1.7)	9.3 (1.8)
Grade 8 1984	6.6 (1.7)	7.5 (0.9)	4.9 (0.9)	9.4 (1.6)
Grade 11 1988	2.8 (0.6)	4.4 (1.1)	1.8 (0.4)	8.5 (2.5)
Grade 11 1984	3.2 (0.9)	5.1 (0.8)	3.7 (1.1)	8.3 (2.2)
Percentage fragments				
Grade 4 1988	3.7 (1.2)	5.6 (1.5)	3.6 (1.1)	5.3 (1.4)
Grade 4 1984	3.0 (0.7)	3.4 (0.7)	1.6 (0.6)	3.6 (0.6)
Grade 8 1988	0.7 (0.5)*	4.2 (0.6)	3.1 (0.6)	4.8 (1.0)
Grade 8 1984	7.2 (2.1)	3.1 (0.5)	3.4 (0.8)	3.3 (0.8)
Grade 11 1988	3.0 (1.0)	2.9 (0.6)	2.5 (0.6)	3.8 (1.1)
Grade 11 1984	4.2 (1.5)	3.0 (0.5)	3.1 (0.6)	5.8 (1.5)
Percentage sentences with agreement errors				
Grade 4 1988	1.7 (0.7)	3.9 (0.8)	2.5 (1.3)	3.5 (0.7)
Grade 4 1984	4.9 (1.5)	3.8 (0.7)	4.9 (1.7)	4.0 (0.8)
Grade 8 1988	0.9 (0.5)*	3.4 (0.6)	3.3 (0.8)	3.2 (0.8)
Grade 8 1984	5.8 (1.6)	3.0 (0.7)	3.6 (0.8)	3.9 (1.0)
Grade 11 1988	2.3 (0.7)	2.4 (0.5)	1.6 (0.3)	3.6 (0.9)
Grade 11 1984	1.9 (0.7)	3.3 (0.6)	2.0 (0.5)	4.7 (1.5)
Percentage awkward sentences				
Grade 4 1988	25.8 (3.3)	33.2 (3.1)	28.0 (4.7)	32.4 (3.1)
Grade 4 1984	20.7 (3.1)	26.4 (2.2)	20.6 (3.3)	25.5 (2.5)
Grade 8 1988	36.6 (7.2)	37.9 (2.0)	30.4 (2.0)*	42.4 (2.6)
Grade 8 1984	23.1 (3.7)	33.4 (1.8)	23.5 (2.6)	38.1 (2.8)
Grade 11 1988	21.4 (1.6)	24.6 (1.6)*	19.5 (1.6)	30.6 (2.1)
Grade 11 1984	24.8 (2.1)	32.8 (2.0)	22.8 (1.6)	39.2 (3.9)

Trends in Word-Level Errors for Good and Poor Papers

Year	Task Accomplishment: Good Papers (Primary Trait) 3 & 4	Task Accomplishment: Poor Papers (Primary Trait) 1 & 2	Overall Fluency: Good Papers (Holistic) 4, 5, & 6	Overall Fluency: Poor Papers (Holistic) 1, 2, & 3
Percentage misspelled words				
Grade 4 1988	4.8 (0.6)*	11.0 (0.9)	4.4 (0.6)	10.6 (0.9)
Grade 4 1984	7.5 (0.6)	9.1 (0.5)	5.3 (0.9)	9.2 (0.5)
Grade 8 1988	2.5 (0.7)	4.4 (0.3)	3.4 (0.4)	5.1 (0.3)
Grade 8 1984	4.8 (0.9)	3.7 (0.2)	3.5 (0.3)	4.5 (0.5)
Grade 11 1988	2.4 (0.6)	2.3 (0.3)	1.7 (0.2)	3.3 (0.4)
Grade 11 1984	2.1 (0.5)	2.5 (0.1)	1.7 (0.2)	3.8 (0.4)
Percentage word-choice errors				
Grade 4 1988	0.3 (0.1)	0.8 (0.1)	0.6 (0.2)	0.6 (0.1)
Grade 4 1984	0.5 (0.1)	0.9 (0.1)	0.8 (0.2)	0.8 (0.1)
Grade 8 1988	0.5 (0.2)	0.9 (0.1)	0.8 (0.2)	0.9 (0.1)
Grade 8 1984	0.9 (0.2)	0.7 (0.1)	0.7 (0.1)	1.0 (0.2)
Grade 11 1988	0.8 (0.3)	0.7 (0.1)	0.5 (0.1)	1.2 (0.2)*
Grade 11 1984	0.6 (0.1)	0.7 (0.1)	0.7 (0.1)	0.7 (0.1)
Percentage capitalization errors				
Grade 4 1988	0.3 (0.1)	1.0 (0.4)	0.4 (0.3)	0.9 (0.4)
Grade 4 1984	0.7 (0.3)	0.8 (0.2)	0.6 (0.4)	0.8 (0.2)
Grade 8 1988	0.2 (0.1)*	0.6 (0.2)	1.0 (0.5)	0.4 (0.1)
Grade 8 1984	1.2 (0.5)	0.4 (0.2)	0.7 (0.2)	0.6 (0.3)
Grade 11 1988	0.9 (0.6)	0.3 (0.1)	0.4 (0.2)	0.6 (0.3)
Grade 11 1984	0.3 (0.2)	0.2 (0.1)	0.3 (0.1)	0.2 (0.2)

*Shows statistically significant difference between years at the .05 level. Jackknifed standard errors are presented in parentheses. Data for grade 4 are based on a different writing task than data for grades 8 and 11.

Trends in Punctuation Errors for Good and Poor Papers

	Year	Task Accomplishment: Good Papers (Primary Trait) 3 & 4	Task Accomplishment: Poor Papers (Primary Trait) 1 & 2	Overall Fluency: Good Papers (Holistic) 4, 5, & 6	Overall Fluency: Poor Papers (Holistic) 1, 2, & 3
Total punctuation errors per 100 words					
Grade 4	1988	1.7 (0.2)	3.7 (0.5)	1.8 (0.3)	3.4 (0.5)
	1984	1.9 (0.2)	3.0 (0.3)	1.8 (0.3)	2.9 (0.2)
Grade 8	1988	1.3 (0.2)	1.9 (0.2)	1.7 (0.2)	2.0 (0.2)
	1984	1.8 (0.2)	1.9 (0.1)	1.7 (0.2)	2.2 (0.2)
Grade 11	1988	1.9 (0.4)*	1.9 (0.4)	1.3 (0.1)	2.3 (0.3)
	1984	1.0 (0.1)	1.8 (0.1)	1.4 (0.2)	2.1 (0.3)
Punctuation omitted per 100 words					
Grade 4	1988	1.6 (0.2)	3.5 (0.5)	1.7 (0.3)	3.2 (0.5)
	1984	1.7 (0.3)	2.7 (0.2)	1.8 (0.3)	2.5 (0.2)
Grade 8	1988	1.1 (0.2)	1.5 (0.2)	1.4 (0.2)	1.6 (0.2)
	1984	1.4 (0.2)	1.4 (0.1)	1.3 (0.1)	1.7 (0.2)
Grade 11	1988	1.5 (0.3)*	1.5 (0.4)	1.0 (0.1)	1.8 (0.3)
	1984	0.7 (0.1)	1.4 (0.1)	1.0 (0.2)	1.6 (0.3)
Wrong punctuation per 100 words					
Grade 4	1988	0.1 (0.1)	0.2 (0.1)	0.1 (0.1)	0.2 (0.0)
	1984	0.2 (0.1)	0.3 (0.1)	0.0 (0.0)	0.3 (0.1)
Grade 8	1988	0.2 (0.1)	0.4 (0.1)	0.4 (0.1)	0.4 (0.1)
	1984	0.4 (0.1)	0.4 (0.1)	0.4 (0.1)	0.5 (0.1)
Grade 11	1988	0.4 (0.1)	0.4 (0.1)	0.3 (0.0)	0.5 (0.1)
	1984	0.3 (0.1)	0.4 (0.1)	0.4 (0.1)	0.5 (0.1)

*Shows statistically significant difference between years at the .05 level. Jackknifed standard errors are presented in parentheses. Data for grade 4 are based on a different writing task than data for grades 8 and 11.

Grammar, Punctuation, and Spelling: Trends in the Characteristics of Papers by Race/Ethnicity and Gender

		Race/Ethnicity		Gender	
	Year	Black	White	Male	Female
Number of words					
Grade 4	1988	31.9 (1.6)†	37.8 (2.2)	31.0 (1.5)†	41.4 (3.2)
	1984	30.9 (2.3)	34.2 (1.2)	29.9 (1.2)†	37.3 (1.4)
Grade 8	1988	62.2 (2.3)†	73.0 (3.1)	58.3 (2.6)†	83.2 (3.6)*
	1984	58.0 (4.2)†	68.3 (2.1)	58.6 (2.2)†	74.8 (2.8)
Grade 11	1988	90.1 (3.9)*	99.0 (3.1)	86.7 (3.8)†	105.0 (3.2)
	1984	79.3 (4.0)†	96.3 (3.0)	80.1 (2.5)†	105.3 (3.7)
Word length					
Grade 4	1988	4.0 (0.1)	3.9 (0.1)	4.0 (0.1)	4.0 (0.1)
	1984	4.0 (0.1)	3.9 (0.1)	3.9 (0.1)	4.0 (0.1)
Grade 8	1988	4.1 (0.1)	4.1 (0.1)	4.1 (0.1)	4.1 (0.1)
	1984	4.1 (0.1)	4.1 (0.1)	4.1 (0.1)	4.1 (0.1)
Grade 11	1988	4.3 (0.1)	4.3 (0.1)	4.3 (0.1)	4.3 (0.1)
	1984	4.3 (0.1)	4.3 (0.1)	4.3 (0.1)	4.3 (0.1)
Number of sentences					
Grade 4	1988	2.6 (0.1)	2.9 (0.2)	2.5 (0.2)	3.1 (0.3)
	1984	2.6 (0.4)	2.7 (0.1)	2.4 (0.1)†	3.0 (0.2)
Grade 8	1988	4.2 (0.3)†	5.5 (0.4)	4.2 (0.3)†	6.3 (0.4)
	1984	3.7 (0.3)†	5.0 (0.3)	4.0 (0.3)†	5.4 (0.3)
Grade 11	1988	5.7 (0.2)*	6.2 (0.3)	5.6 (0.3)†	6.6 (0.3)
	1984	4.5 (0.3)†	6.1 (0.2)	4.9 (0.2)†	6.6 (0.2)
Number of words per sentence					
Grade 4	1988	14.2 (0.8)	15.6 (0.9)	14.2 (0.7)	16.2 (1.1)
	1984	14.8 (0.6)	15.0 (0.5)	15.1 (0.6)	14.6 (0.5)
Grade 8	1988	18.5 (1.1)†	15.7 (0.6)	16.6 (0.8)	16.5 (0.5)
	1984	19.3 (1.2)†	16.3 (0.4)	18.2 (0.8)†	16.0 (0.4)
Grade 11	1988	17.9 (0.7)*	18.0 (0.5)	18.2 (0.7)	17.4 (0.5)
	1984	20.3 (0.8)†	17.6 (0.6)	19.2 (0.9)†	17.0 (0.5)
Number of errors					
Grade 4	1988	5.6 (0.4)	5.3 (0.4)	4.9 (0.5)	5.6 (0.3)
	1984	6.4 (0.8)†	4.3 (0.2)	4.7 (0.3)	5.2 (0.3)
Grade 8	1988	7.0 (0.5)	6.7 (0.5)	6.3 (0.4)	7.8 (0.7)
	1984	6.2 (0.5)	6.3 (0.7)	6.0 (0.5)	6.6 (0.6)
Grade 11	1988	6.6 (0.5)	5.5 (0.5)	6.1 (0.6)	5.9 (0.6)
	1984	6.7 (0.6)	5.8 (0.2)	6.1 (0.2)	6.2 (0.3)
Error rate					
Grade 4	1988	20.7 (1.5)	17.2 (1.9)	20.1 (2.2)	15.3 (1.2)
	1984	24.6 (2.8)†	14.3 (0.7)	18.1 (1.4)	15.5 (0.9)
Grade 8	1988	11.7 (0.5)	10.7 (0.7)	12.1 (0.8)	11.5 (2.1)
	1984	13.3 (1.2)	10.0 (1.2)	11.3 (1.2)	9.6 (0.9)
Grade 11	1988	8.6 (0.8)	7.3 (1.2)	8.8 (1.5)	7.5 (1.4)
	1984	10.4 (1.5)†	6.9 (0.3)	8.5 (0.5)†	6.9 (0.5)

*Shows statistically significant difference between years at the .05 level.

†Shows statistically significant difference between subgroups within year at the .05 level (Black compared with White, male compared with female).

Jackknifed standard errors are presented in parentheses.

Data for grade 4 are based on a different writing task than data for grades 8 and 11.

Trends in the Use of Sentence Types by Race/Ethnicity and Gender

		Race/Ethnicity		Gender	
	Year	White	Black	Male	Female
Percentage run-on sentences					
Grade 4	1988	18.7 (3.9)	18.0 (2.7)	17.3 (3.6)	16.8 (2.2)
	1984	12.7 (2.5)	15.0 (1.5)	14.4 (2.1)	17.2 (2.2)
Grade 8	1988	11.3 (2.1)†	5.7 (0.9)	9.2 (2.0)	7.5 (1.4)
	1984	7.7 (2.4)	5.7 (0.8)	8.6 (1.4)	6.0 (1.0)
Grade 11	1988	5.2 (1.1)	3.6 (1.1)	5.7 (1.7)	2.6 (0.6)
	1984	5.1 (1.7)	5.0 (0.8)	5.3 (1.2)	4.4 (1.0)
Percentage sentence fragments					
Grade 4	1988	4.9 (1.3)	4.9 (1.3)	5.5 (1.5)	4.5 (1.1)
	1984	4.7 (1.5)	3.0 (0.6)	3.5 (1.0)	3.1 (0.6)
Grade 8	1988	4.1 (0.9)	4.1 (0.7)	4.5 (1.1)	3.6 (0.7)
	1984	4.9 (1.4)	3.4 (0.6)	3.8 (0.9)	3.5 (0.6)
Grade 11	1988	4.1 (1.0)	2.3 (0.5)	2.7 (0.5)	3.1 (0.8)
	1984	5.6 (1.1)†	2.6 (0.4)	3.9 (0.8)	2.6 (0.5)
Percentage sentences with agreement errors					
Grade 4	1988	8.2 (1.5)	2.1 (0.7)	3.4 (0.9)	3.1 (0.9)
	1984	10.3 (2.6)	3.0 (0.7)	3.5 (0.8)	4.7 (1.1)
Grade 8	1988	7.7 (1.8)	2.5 (0.6)	3.0 (0.6)	3.4 (0.8)
	1984	3.7 (1.3)	3.2 (0.7)	3.1 (0.8)	3.7 (0.9)
Grade 11	1988	5.1 (0.9)	1.5 (0.4)	2.4 (0.6)	2.3 (0.6)
	1984	3.6 (0.9)	2.8 (0.6)	4.1 (1.0)	1.8 (0.3)
Percentage awkward sentences					
Grade 4	1988	39.5 (3.6)†	26.8 (2.7)	33.1 (3.8)	28.8 (2.3)
	1984	42.4 (5.2)†	20.4 (2.1)	25.4 (2.6)	24.1 (2.2)
Grade 8	1988	46.4 (2.9)†	34.9 (2.0)*	39.9 (2.7)	35.7 (2.2)*
	1984	49.4 (5.0)†	28.1 (1.7)	34.4 (2.4)	29.7 (1.7)
Grade 11	1988	31.0 (2.1)†	20.8 (1.7)*	27.4 (1.6)†*	20.8 (1.7)*
	1984	38.1 (5.1)	28.3 (1.8)	35.1 (2.5)†	27.5 (2.0)

Trends in Word-Level Errors by Race/Ethnicity and Gender

		Race/Ethnicity		Gender	
	Year	White	Black	Male	Female
Percentage misspelled words					
Grade 4	1988	9.2 (0.8)	9.2 (1.0)	10.0 (1.1)	8.3 (0.7)
	1984	10.3 (1.0)	7.7 (0.6)	9.7 (0.8)	7.6 (0.5)
Grade 8	1988	4.0 (0.3)	4.2 (0.3)	5.0 (0.3)	3.7 (0.4)
	1984	4.1 (0.5)	3.8 (0.3)	4.5 (0.4)	3.2 (0.3)
Grade 11	1988	2.3 (0.3)	2.1 (0.3)	2.6 (0.4)	2.0 (0.3)
	1984	2.5 (0.3)	2.3 (0.1)	2.9 (0.2)	2.0 (0.2)
Percentage word-choice errors					
Grade 4	1988	1.0 (0.2)	0.2 (0.1)	0.6 (0.1)	0.7 (0.1)
	1984	2.0 (0.4)	0.5 (0.1)	0.7 (0.1)	0.9 (0.1)
Grade 8	1988	1.3 (0.2)	0.7 (0.1)	0.8 (0.1)	0.9 (0.2)
	1984	1.4 (0.4)	0.6 (0.1)	0.7 (0.1)	0.8 (0.1)
Grade 11	1988	1.1 (0.2)	0.6 (0.1)	0.7 (0.1)	0.8 (0.1)
	1984	1.2 (0.2)	0.6 (0.1)	0.7 (0.1)	0.7 (0.1)
Percentage capitalization errors					
Grade 4	1988	0.5 (0.1)	0.9 (0.4)	1.1 (0.5)	0.4 (0.1)
	1984	1.6 (0.6)	0.6 (0.1)	0.9 (0.2)	0.7 (0.2)
Grade 8	1988	0.3 (0.1)*	0.5 (0.2)	0.5 (0.2)	0.7 (0.4)
	1984	0.7 (0.2)	0.6 (0.3)	0.7 (0.3)	0.4 (0.2)
Grade 11	1988	0.3 (0.1)	0.4 (0.2)	0.4 (0.2)	0.5 (0.2)
	1984	0.5 (0.3)	0.2 (0.1)	0.2 (0.1)	0.2 (0.1)

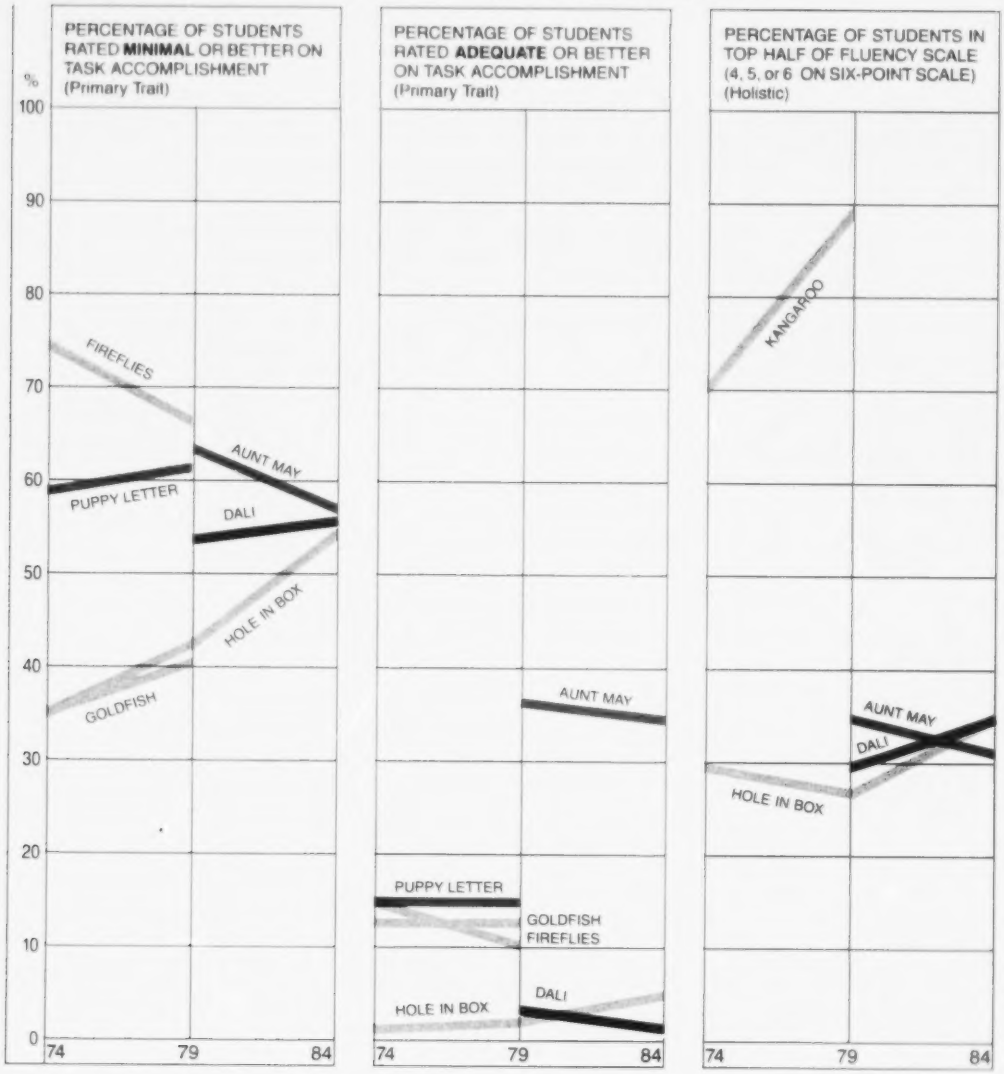
*Shows statistically significant difference between years at the .05 level.
†Shows statistically significant difference between subgroups within year at the .05 level (Black compared with White, male compared with female).
Jackknifed standard errors are presented in parentheses. Data for grade 4 are based on a different writing task than data for grades 8 and 11.

Trends in Punctuation Errors by Race/Ethnicity and Gender

		Race/Ethnicity		Gender	
	Year	Black	White	Male	Female
Total punctuation errors per 100 words					
Grade 4	1988	4.7 (0.8)	2.8 (0.4)	4.0 (0.6)	2.2 (0.3)
	1984	3.4 (0.4)	2.5 (0.3)	2.8 (0.3)	2.6 (0.3)
Grade 8	1988	2.0 (0.2)	1.7 (0.2)	2.0 (0.2)	1.7 (0.2)
	1984	2.8 (0.4)	1.7 (0.2)	1.9 (0.2)	1.8 (0.2)
Grade 11	1988	1.7 (0.1)*	1.9 (0.4)	2.3 (0.7)	1.5 (0.2)
	1984	2.3 (0.2)	1.6 (0.2)	1.8 (0.2)	1.7 (0.2)
Punctuation omitted per 100 words					
Grade 4	1988	4.2 (0.7)	2.7 (0.4)	3.8 (0.6)*	2.1 (0.3)
	1984	2.9 (0.4)	2.2 (0.2)	2.4 (0.3)	2.5 (0.3)
Grade 8	1988	1.7 (0.2)	1.4 (0.2)	1.6 (0.2)	1.3 (0.1)
	1984	2.5 (0.4)	1.2 (0.1)	1.5 (0.1)	1.4 (0.1)
Grade 11	1988	1.3 (0.1)*	1.5 (0.4)	1.9 (0.7)	1.2 (0.2)
	1984	1.8 (0.1)	1.2 (0.1)	1.4 (0.2)	1.3 (0.2)
Wrong punctuation per 100 errors					
Grade 4	1988	0.5 (0.2)	0.1 (0.1)	0.2 (0.1)	0.1 (0.1)
	1984	0.5 (0.3)	0.2 (0.1)	0.4 (0.1)	0.2 (0.1)
Grade 8	1988	0.3 (0.1)	0.3 (0.1)	0.4 (0.1)	0.4 (0.1)
	1984	0.4 (0.1)	0.5 (0.1)	0.5 (0.1)	0.4 (0.1)
Grade 11	1988	0.3 (0.1)	0.4 (0.1)	0.4 (0.1)	0.4 (0.1)
	1984	0.5 (0.1)	0.3 (0.0)	0.4 (0.1)	0.4 (0.1)

*Shows statistically significant difference between years at the .05 level. Jackknifed standard errors are presented in parentheses. Data for grade 4 are based on a different writing task than data for grades 8 and 11.

Trends in 9-Year-Old Students' Writing Achievement, 1974-84

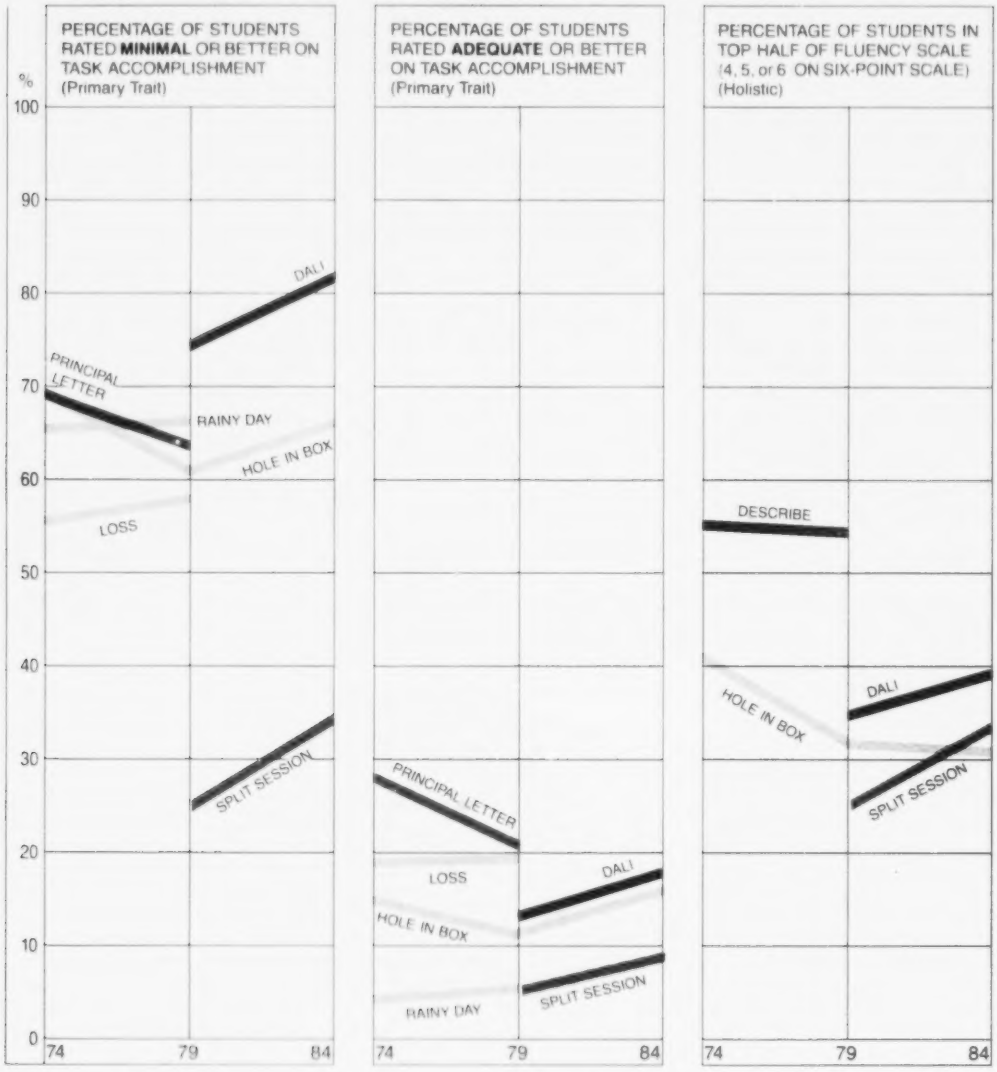


■ INFORMATIVE WRITING *Brief Description of Task*	AGES	ASSESSMENT YEARS
Describe a surrealistic painting by Salvador Dali for a friend who has never seen it.	9,13,17	1979-84
■ PERSUASIVE WRITING *Brief Description of Task*		
Write a letter convincing the landlord you should get to keep your puppy.	9	1974-79
Write a letter to your favorite aunt, let's call her "Aunt May". Convince her you are old enough to travel alone to come visit her.	9	1979-84

■ IMAGINATIVE WRITING *Brief Description of Task*	AGES	ASSESSMENT YEARS
Write a story about the picture of a girl trying to catch fireflies.	9	1974-79
What would it be like to be something besides a person — like a goldfish, airplane, horse or tree?	9	1974-79
Imagine yourself in the picture of a box with a hole in it and an eye peeking through the opening. Describe the scene and how you feel about it.	9,13,17	1974-79-84
Write a story about the picture of a kangaroo jumping over a fence.	9	1974-79

NOTE: For results reported in 1979, responses to a given task were rated either for task accomplishment (primary trait) or fluency (holistically), not both. For results reported in 1984, responses were rated using both methods. For 1974-79, the writing tasks and detailed results are contained in NAEP's previous writing trend reports published by the Education Commission of the States.

Trends in 13-Year-Old Students' Writing Achievement, 1974-84

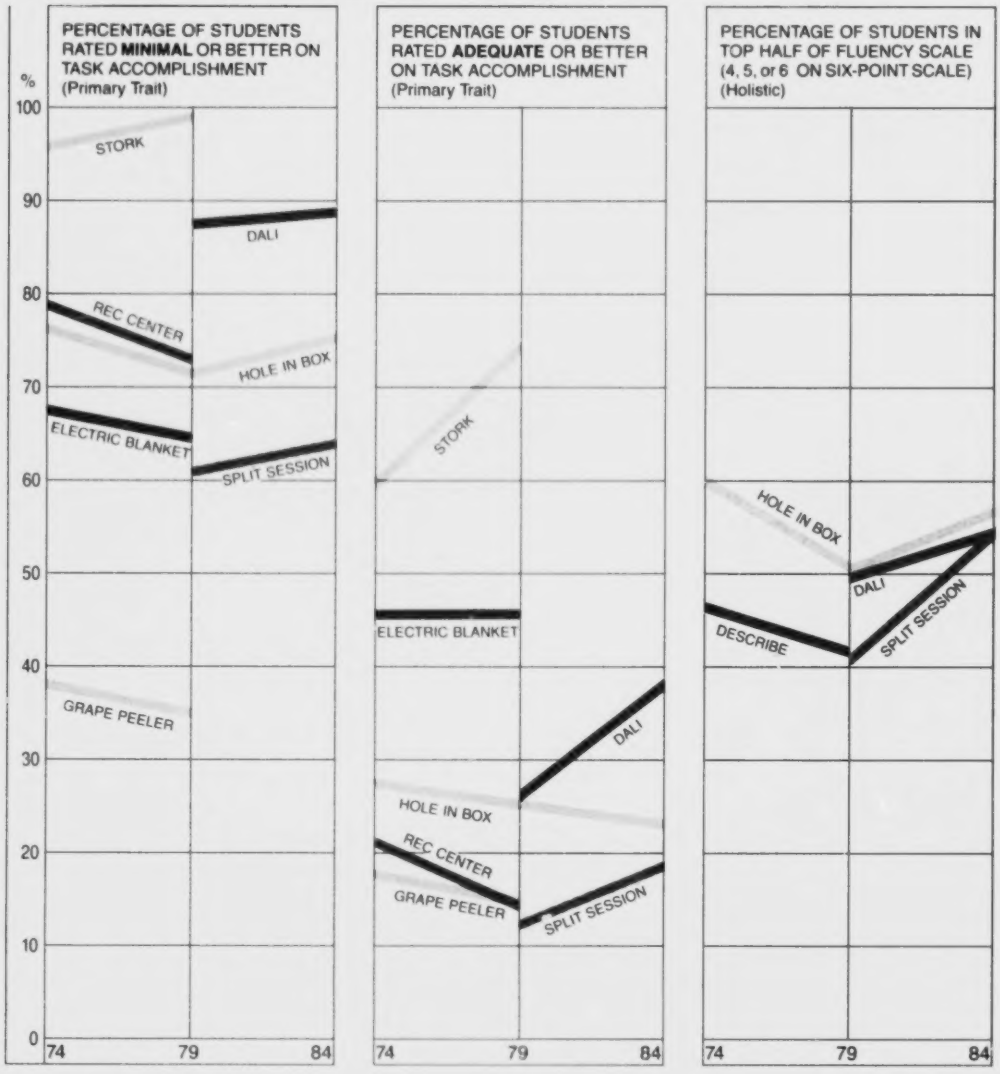


■ INFORMATIVE WRITING *Brief Description of Task*	AGES	ASSESSMENT YEARS
Describe a surrealistic painting by Salvador Dali for a friend who has never seen it.	9,13,17	1979-84
Describe a place you know about such as the Empire State Building, a gigantic wheat field or a sports stadium.	13,17	1974-79
■ PERSUASIVE WRITING *Brief Description of Task*		
Write your principal a letter about the one thing in your school that should be changed and how it would improve your school.	13	1974-79
Convince the principal to give you the school session of your choice — morning or afternoon.	13,17	1979-84

■ IMAGINATIVE WRITING *Brief Description of Task*	AGES	ASSESSMENT YEARS
Imagine yourself in the picture of a box with a hole in it and an eye peeking through the opening. Describe the scene and how you feel about it.	9,13,17	1974-79-84
Pretend you saw it was a rainy day. Write about how a rainy school morning makes you feel.	13	1974-79
Tell how it feels to lose something or someone of special importance.	13	1974-79

NOTE: For results reported in 1979, responses to a given task were rated either for task accomplishment (primary trait) or fluency (holistically), not both. For results reported in 1984, responses were rated using both methods. For 1974-79, the writing tasks and detailed results are contained in NAEP's previous writing trend reports published by the Education Commission of the States.

Trends in 17-Year-Old Students' Writing Achievement, 1974-84



■ INFORMATIVE WRITING *Brief Description of Task*	AGES	ASSESSMENT YEARS
Describe a surrealistic painting by Salvador Dali for a friend who has never seen it.	9,13,17	1979-84
Write a letter explaining that you should not be billed every month for the electric blanket you never received.	17	1974-79
Describe a place you know about such as the Empire State Building, a gigantic wheat field or a sports stadium.	13,17	1974-79
■ PERSUASIVE WRITING *Brief Description of Task*		
Support or oppose a plan to convert an old house into a student recreation center.	17	1974-79
Convince the principal to give you the school session of your choice — morning or afternoon.	13,17	1979-84

■ IMAGINATIVE WRITING *Brief Description of Task*	AGES	ASSESSMENT YEARS
Imagine yourself in the picture of a box with a hole in it and an eye peeking through the opening. Describe the scene and how you feel about it.	9,13,17	1974-79-84
Look at the picture of a stork and make up a story about how it appeared in your neighborhood.	17	1974-79
Have fun writing a letter to return your gold-plated grape peeler.	17	1974-79

NOTE: For results reported in 1979, responses to a given task were rated either for task accomplishment (primary trait) or fluency (holistically), not both. For results reported in 1984, responses were rated using both methods. For 1974-79, the writing tasks and detailed results are contained in NAEP's previous writing trend reports published by the Education Commission of the States.

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